ELEMENTS OF BOND INVESTMENT

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EDITOR'S PREFACE

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In this volume of the Library the author outlines the basic principles of investment and discusses financial statements from the investment point of view. He classifies the various forms of investment bonds, giving specific treatment to national government bonds; state, county and municipal issues; railroad, public utility and industrial bonds. As every man engaged in business is either an actual or a potential investor, this volume has been brought into the series of quick-reference manuals which constitute the Ronograph Library.

FRANK A. FALL,
Editor

PREFACE

The purpose of this book is to present in non-technical manner the principles underlying bond investment.

At no time has there been a greater demand for reliable data regarding bond values in comprehensive form. The era of commercial prosperity among all classes during the war, the wide distribution of Liberty bonds, together with the influence of various thrift campaigns, have combined to widen greatly the extent of the public interested in profitable and conservative investments. At no time, moreover, has the subject demanded more accurate and extended information.

The material for the book has been gathered during the author's experience of more than a decade as bond statistician and investment analyst in which he has been brought into close touch with private investors, bond salesmen, and students of investment. Certain details of the handling, however, are the result of a series of discussions of the subject before the bond salesmen of The Equitable Trust Company of New York, serving to focus attention upon points as to which information is particularly desired at the present time, on the part alike of investors and of those engaged in the bond business.

The author wishes to express his appreciation of the encouragement and assistance rendered by Mr. Morris K. Parker, in charge of the Bond Department of The Equitable Trust Company and the members of his staff.

A. M. Sakolski.

New York City,
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CHAPTER I

FUNDAMENTAL PRINCIPLES OF INVESTMENT

Definition of Investment

From a strictly financial standpoint modern investment is the surrendering of purchasing power to another with a view to obtaining a profit in addition to the return of the amount surrendered. This definition does not apply to the ordinary usage of the word "investment," since anyone who uses funds in executing a business operation may be said to make an investment. Thus a man who purchases a residence may be regarded as making an investment. But it would not be investment in the strict financial sense, since the purchaser of the house retains control of the property and does not use it for the purpose of receiving income. Similarly, a manufacturer or a merchant who uses his funds to build up and conduct a business is not an investor from the financial viewpoint as long as he does not surrender the control of the funds.

In the strictest sense, therefore, "investment implies the divesting oneself of the possession and control of one's assets and granting such possession and control to another."[1] There is in addition a further implication in the word, namely, that the prime reason for divesting oneself of assets and turning them over to the control of another is for the purpose of obtaining a profit or

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[1] Sprague, C. E., and Perrine, L. L., "The Accountancy of Investment," page 20.

periodical income as well as the final return of the value of the amount advanced.

Modern Investment

Transactions that may be termed "investments" are comparatively recent in human history. They are a characteristic of modern business. In ancient and medieval times investments were infrequent because business men controlled the use of their own property and bartered it in business dealings, just as merchants nowadays do. The earliest forms of wealth were mainly land and precious metals, i.e., coins. Intangible forms of wealth, such as bonds, notes, bills of exchange, or paper money, were almost unknown until modern times.

Lord Macaulay relates that when the father of Alexander Pope, the poet, retired from business and moved from one town to another he carried with him a chest of coins which constituted his accumulated possessions. The art museums today contain examples of these old strong boxes which were the chief means of safeguarding and storing wealth before the advent of banks. Modern banking institutions did not come into existence until men had funds which they could not use profitably in their own private enterprises and which they were willing to turn over to the use or control of others. Thus the growth of modern investment is closely linked with the development of credit and banking.

Early Fields of Investment

During the eighteenth century, investment as it is known today developed rapidly. This was due chiefly to two circumstances: the increase in the size of business organizations, and the growth of national indebtedness.

Shipping and commercial operations began to be conducted on a large scale in the period following the great geographical discoveries. Business enterprises became larger than a single individual could generally undertake with his private store of capital. The logical outcome was the banding together of business men to inaugurate, operate, and control industrial or commercial enterprises. This, in turn, created an industrial class, known as "promoters," or "enterprisers," who induced their wealthy friends and others to advance money for their undertakings, such, for example, as the buying and chartering of ocean vessels, or the building and operation of factories. Aside from land and real estate, shipping and trading companies were the early fields for business investment. Good examples of early large trading concerns were the British East India Company and the Dutch East India Company that settled in New York, the ownership of which was well distributed among investors.

In addition to trading undertakings the loans, which in the eighteenth century the national governments began to receive from their richer citizens, furnished an investment use for idle funds. The growth of national or public indebtedness has been one of the many important results of modern wars. The development of great nations and the spread of constitutional authority based on democratic principles have encouraged speculation and investment in government securities. These factors, together with the large-size industrial and commercial undertakings, created modern investment as we know it.

Rise of Industrial Corporations

It was not, however, until the early part of the nineteenth century that certain developments increasing both

the supply of public investments and the demand for them became dominant factors. Wealth accumulated very rapidly in the period following the Napoleonic Wars. Machinery displaced hand labor in many industries, and with this development the size of industrial undertakings expanded on an ever-increasing scale. The wealth of a single individual or of a small group of individuals was often insufficient to supply all the capital needed for an enterprise. Partnership also became inadequate, since individuals were not always disposed to enter into undertakings with others in which they risked all their wealth.

As a substitute for partnership the corporation form of business organization, stockholders in which were permitted to limit their liability to the amount of their investment, came into favor. Business corporations both in Great Britain and in this country multiplied rapidly and the various classes of securities representing ownership in or indebtedness of corporations were readily negotiated and transferred from person to person.

With the increase in the scale of business enterprise came great progress in transportation and growth of large industrial centers. To provide markets for the output of large factories, expensive turnpikes, canals, and railways were built with money obtained from investors. Thus the first half of the nineteenth century, so favorable to permanent improvements, greatly enlarged the field of investment. Nations and their political subdivisions in their desire to promote industrial development built these canals, railways, and turnpikes with borrowed money. Several of the states of the Union increased their public debts to such an extent that they were later unable to fulfil their obligations to their creditors. There thus arose a phase of state debt repu-

diation which will be discussed more fully in a subsequent chapter.

Investment Fundamentals

There are two fundamental considerations entering into the making of an investment: the security of principal, and the security of income. The security of the principal implies the certainty of the sum of money surrendered being returned or recovered. Such sum of money is termed the "principal" of the investment. In addition to this expected return of the principal, an investor generally demands additional payments, usually in the form of a fixed periodical income, known as "interest," "income," or "yield." The surrendering of property to the use of another without the increment of income is not an investment, but a gratuity, or, as it might be termed, an "accommodation loan." Accordingly, nothing constitutes investment which does not imply the recovery of both the principal sum and also an additional amount or amounts representing income or profit.[2] Keeping these principles constantly in mind will greatly assist students and investors in the study and analysis of the various forms of investments.

To secure the return of the principal it is not essential that the borrower or debtor should agree to repay the loan at any particular time. In other words, it is not necessary for a debt to have a maturity date. Thus, most French government bonds are perpetual, since there is no agreement to redeem them at any time. The return of the principal in an investment of this kind is obtained, however, through the negotiability or marketability of

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[2] It may be mentioned here that annuities are not generally considered as investments for the reason that there is usually neither a profit involved nor any purpose to make a profit.

the security, i.e., an investor is enabled to dispose of his commitments through sale and receive back the principal sum surrendered. He need not, therefore, be concerned with the due date of bonds or other types of investments he may hold. As long as the investor can transfer for value the evidence of ownership or indebtedness he holds, there may be ample security of principal.

Security of Principal

1. Responsibility of Borrower

Of the factors entering into the security of principal, the foremost is the financial responsibility of the borrower or user of the funds advanced. Both present and potential financial responsibilities are important considerations. The amount of the borrower's wealth and its availability to meet the principal sum when due are the gauges for determining the degree of the security of the principal. Proper use of borrowed funds is another factor the lender must consider. If a person goes to a bank to borrow money, the banker usually inquires as to the use to which the money is to be put. If the banker is told that the money is desired to play the races or for other illegitimate purposes he is very likely to refuse the request unless he is given a pledge or collateral on which he can realize the value of the sum advanced, independently of the borrower's capacity to pay. Without collateral, the banker must have full confidence that when the proposed loan comes due the borrower will have sufficient wealth on hand to pay the indebtedness. The use to be made of the wealth furnished the borrower is, therefore, frequently an important factor in determining the security of principal.

It is not sufficient for the borrower merely to have

resources with which to pay the loan. There should be some means of enforcing or compelling him to pay. Hence, many investment securities have what is known as a "mortgage," or a pledge of property, back of them. The purpose of a mortgage is to insure performance of the borrower's obligations. In case of default or bankruptcy of the borrower, the mortgage, or pledge, gives the lender, i.e., the investor, a preferred claim on property as against other creditors. In other words, he has authority to make a legal seizure of property and dispose of it to satisfy the loan. The conditions of the mortgage are scrutinized very carefully in studying the merits of various classes of investments. Most American railroad bonds are mortgage bonds. Bonds which have no mortgage security are known as "debentures," or plain bonds in the United States. The distinguishing characteristics of these two classes of securities are discussed in detail in a later chapter.

2. Durability of Assets

A further element in the security of principal is the permanence or durability of the assets which secure the investment. If a person is loaned $1,000 with the agreement that he pay it back in twenty-five years, and the only security he gives is a pledge of a frame building with no provision requiring that it be kept in repair and in as good condition as when the money was loaned, the lender may find no value at all to the security at the end of the twenty-five years. Hence his principal may be lost.

A careful investor demands that provisions be included in the mortgage to guard against future losses of value. For this reason most loan agreements secured by a pledge of property contain a provision requiring

maintenance and repairs, as well as insurance against accidents, fires, floods, and other contingencies. In this way the investor, though not always having the right to take possession and control of the pledged property, is given some indirect means of protecting the principal of his investment. This matter will be discussed in more detail in Chapter III.

3. Market Value or Earning Power

Another element in the security of the principal is the character of the property safeguarding the repayment of the investment. The property should have what is known as "market value," or marketability. In other words, the property or assets should be readily transferable. This does not mean that pledged assets should always be of a nature to command ready purchasers and be instantly disposed of. In some cases it may be desirable that the loan be secured by a pledge of, or the title to, quickly salable commodities and goods.

Frequently, however, the property may have no fixed or definite market value that may be determined from day to day by reference to current price quotations. Yet it has an investment value, particularly if the assets are capable of profitable employment. A railroad, for example, cannot be said to have market value, because if it fails to repay the principal on its secured indebtedness it cannot be carried off, or broken up and sold. But if the property has good earning power and is in good physical condition there is likely to be some person or group of persons who will assume the loan and become responsible for the repayment of the principal.[3]

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[3] The fact that one piece of property originally cost more than another or has a greater reproduction cost does not mean that it has a greater value as an investment.

A security which is regularly quoted and sold on a stock exchange, and can be disposed of at any time, has much of the character of a demand loan, the maturity of which is determined by the will or discretion of the lender as well as the borrower. A holder of United States Steel Corporation 5 per cent Sinking Fund Bonds can sell them at any time during the market hours and get back a sum representing the principal, though not necessarily the amount of his original investment, in much the same way as he could demand payment of a "call loan" secured by collateral. There is, however, one important point of distinction. The holder of a demand obligation, or call loan, has the right to receive back at any time the principal amount or face value of the obligation. On the other hand, the holder of an unmatured obligation if he wishes to realize cash for his investment may receive back more or less than his original outlay, depending upon the position of the market price.

Security of Income

1. Amount Received

High rate of income and security of principal do not go hand in hand. They are frequently inversely related. The periodical income received by the investor is generally larger when the security of principal is meager than when it is very firm. Investment income ordinarily represents two elements of compensation; one element is known as "compensation for risk," the other is called "pure interest" and constitutes the payment for the use of money or its equivalent. Naturally, the greater risk that an investor takes when making a loan, the more income he demands to cover this risk.

2. Stability of Interest Return

It is important in studying an investment to determine the permanence or stability, as well as the amount, of the income to be received. Most people loan money in order to get a periodical income from it. The best assurance of receiving it is the permanence of the earning power of the borrower. An investor who lends money to a railroad that fails to make a profit on its operations is generally unwilling to receive a part of the railroad back in lieu of cash income. The income is payable in cash or its equivalent, so that the railroads must earn a profit over current expenses to pay the interest. If the company does not earn enough money over a period of years to pay its current expenses and regular interest charges there is usually no assurance of stability of income to the investors that have furnished funds to a company. A concern in this position finds it impossible or exceedingly difficult to sell its securities in the market because the majority of investors demand regular periodical income and will make commitments only in companies that have met their interest obligations over a period of years.

3. Maintaining Stability

What are the means at hand for maintaining stability of income? Back of this question lies the important distinction between bonds and stocks as investments. In the case of bonds the essential query is, "Has the lender or holder of the bond some right or power to demand and enforce the payment of the income by the debtor corporations?" In the case of stocks there is usually no such power, and, as a rule, the stockholder is less sure of his income than the bondholder. A great many investors, however, neglect the fact that a stockholder is only a

proprietor and cannot enforce the collection of his investments; whereas the bondholder usually has some power. Whether the bondholder can personally and without legal assistance exercise that power, is another matter.[4]

4. Taxation

Stability of investment income is affected by the taxes imposed upon it. Whenever the holder of a security is taxed on the income received therefrom, he is deprived of a part of this income. Hence, when making a purchase of an investment security he is never sure of the income he is to receive because the tax rate can be changed from year to year. This is the reason why many investors prefer tax-exempt bonds, i.e., bonds the income from which is not taxed. Such bonds furnish a greater certainty of income. Tax exemption in these days of high income taxation is a very important factor in the selection of investments.

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CHAPTER II

FINANCIAL STATEMENTS

Sources of Financial Information

In the preceding chapter considerable emphasis was placed on the two fundamental factors in bond investment, viz.; security of income and security of principal. In order to measure these factors properly the investor requires data and information on which to form his judgment. The chief sources of information for this purpose are the statements of its financial status issued by the debtor concern, whether it be a nation, state, city, or business corporation. Large corporations give out these statements periodically, usually once a year. Some leading countries, as well as their political subdivisions, follow the same practice.

The Science of Accounting

The study of financial data with a view to gauging the relative investment merits of securities requires some understanding of bookkeeping and accounting principles. Accounting is the science which applies rules and methods to recording financial and business transactions, and to summing up their results in statements from which a layman can get a clear and proper conception of the financial standing of a distinct undertaking. Prior to the advent of the corporate form of business organization, bookkeeping was concerned almost exclusively with tracing the movements of cash. The accounts showed the sources and amounts of cash received and

the manner in which the receipts were disbursed. The main purpose of the early accounting methods was to test the honesty of the employees that handled the cash. The gauging of the proprietor's profits or the results of individual transactions was of secondary importance.

Two Systems

Present-day accounting has a far broader purpose. It aims to exhibit in correct and intelligible form the net gain or loss on operations as expressed in money independent of the movements of cash. The tracing of the actual receipts and disbursements of cash, though an important part of every accounting system, has no direct relation to the results of the business operations, and is absolutely no gauge of the net losses or gains experienced in a specific period of time, or of the net worth of the concern. Profits may be earned even though they are not actually realized in cash. Items of expense are frequently incurred, though not yet due and paid. These principles, now so commonplace and so widely accepted, distinguish the so-called "double-entry" system of bookkeeping from the "single-entry" system. They permit a cross-section view, so to speak, of a concern's financial condition and show the results of its fiscal operations.

Classification of Financial Data

The statements containing financial data are usually three in number:

1. The income statement
2. The profit and loss, or surplus, statement
3. The general balance sheet

The three are correlated and interdependent. Changes

in one are generally reflected in either or both of the other two. The income statement and the profit and loss statement have to do, respectively, with operation and proprietorship. By "proprietorship" is meant the excess of the total resources over the total liabilities to creditors, or the net worth of the concern.

The data of operation as given in the income statement show how the profits and losses for the period taken have been made. The profit and loss statement shows the disposition made of the net profits or losses, the amount paid in dividends, and the amount which remains in the business as a surplus, or deficit in case of a loss. The two statements are frequently combined in one. The general balance sheet, on the other hand, is a statement of financial condition. It shows in summarized form the resources or assets on a given date, and the offsetting liabilities or claims. In the liabilities column are included capital stock, profit and loss—or surplus, as it is commonly called—and other items representing net proprietorship. The inclusion of the net proprietorship among the liabilities forms the connecting link between the income statement and the general balance sheet.

Disposition of Profits

The net gain a concern makes during the fiscal period as shown in the income statement may be paid in whole or in part as dividends to the stockholders, the proprietors, or it may be transferred to the Profit and Loss account. In the latter event the net proprietorship is increased. If a net loss is incurred during the period, the profit and loss balance is reduced and the net proprietorship suffers an equal decrease. Thus, the results of operations as reflected in the income statement

appear in the profit and loss statement on which is recorded the net financial change effected by the operations, and the summary of the general balance sheet.

In drawing the distinction between the income statement and the balance sheet, Professor William M. Cole, of Harvard says: "Only the balance sheet represents the present condition, whereas the income sheet represents the transactions which produced that condition, but ceased to have independence as soon as they were completed." [1]

Charging to Income or to Capital

The income statement is but the Profit and Loss account amplified, to which gains from transactions are credited, and expenses and losses charged, and the balance of which shows the net gain or loss. Expenditures entered in the income statement, representing expenses or losses, are said to be "a charge to Income." Such expenditures naturally reduce the amount of the profit and loss, and, therefore, the amount of the net proprietorship. Expenditures that are made in acquiring additional assets, as plant, machinery, or permanent improvements, are described as "a charge to Capital." In the balance sheet they may cause an increase in both assets and liabilities to creditors, or an increase in some assets and a decrease in others.

Analysis of Income or Profits

As already stated, the net revenue, income, or profits, from which a debtor concern is expected to meet its obligations to pay a fixed periodical return to creditors or investors, is commonly exhibited in the income state-

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[1] Cole, William M., "Accounts, their Construction and Interpretation," page 71.

ment. This statement brings together those bookkeeping items which show:

1. The total amount of money that an organization receives or becomes entitled to receive from its operations during a given period.
2. The disbursements in the form of cash or of obligations incurred.
3. The excess of the receipts over the disbursements —which is the net gain—or the excess of the disbursements over the receipts—which is the net loss.

All this is exhibited concisely in the income statement, generally in the following order.

1. The total receipts are first given, whether from taxes in the case of a political division, or sales of goods or services in the case of a private corporation.

2. From the receipts are subtracted the cost of raw material or goods traded in, the expenses of operation and administration, depreciation and other losses actual and accrued, and certain charges, as taxes, rentals, royalties, etc., applicable to the period taken.

3. The excess of (1) over (2) is known as the "net income" and from it are deducted—

4. Interest on bonds and other forms of indebtedness and certain other accrued charges.

5. The balance remaining after the payment of interest is the net profit or surplus earnings, which are an addition to the proprietorship, and from which dividends are disbursed to the stockholders.

Margin of Safety

Net income as defined above is of peculiar interest to the holder of a company's bonds, since from it the

interest he receives is paid. It is a gauge or rough index of the extent of the company's earning power. The surplus earnings, being the excess of net income over the interest charges, are frequently looked upon as a margin of safety safeguarding the interest payments, and are therefore, the chief determinant of the investment standing of the securities. Thus, if a company has bonds outstanding bearing an annual interest requirement of $100,000 and the surplus earnings after fixed charges, including the interest, for each of a series of years are approximately $100,000, the margin of safety is said to amount to 100 per cent.

Many business concerns have a number of bond issues differing in priority as to claim upon net income, and the margin of safety is calculated with reference to each issue. The relative market standing of each of several bond issues of a concern is largely gauged, other things being equal, by the amount of the margin of surplus earnings on which there is a prior claim. Thus, the Chicago, Milwaukee and St. Paul Railroad General 4½ per cent Bonds, due 1989, sold at 68⅜, when the price for the bonds known as the General and Refunding 4½ per cent Bonds, due 2014, was 54. The difference in the maturity date of these two series of bonds of the same corporation, each bearing the same interest rate, did not warrant the disparity in their market prices. The fact that the general mortgage bonds as an obligation had a prior claim on the earnings and the property of the corporation accounted for the superior market position of the issue.

The question of an ideal margin of safety as a factor in the security of income is of purely academic interest. The wide disparities in operating conditions affecting income stability do not permit the establishment of a

definite rule. It is evident from the relative market price of securities that a margin of 25 per cent above fixed charges in one company's income statement may be a better basis of security value than a 100 per cent margin in the income statement of another company. Stability of earnings from year to year is a factor in the security of income which eliminates the necessity of a large margin of safety.

General Balance Sheet

In studying relative security values, the balance sheet is frequently neglected or passed over hurriedly, not because it is less important than the income statement, but because it is less readily understood. The general balance sheet, if properly prepared and certified, should show as nearly as possible the corporation's correct financial condition as determined by the operating results and fiscal changes since its corporate organization. It is thus a portrayal of cumulative effects, whereas the income statement is merely an exhibit of the results of a year or even a shorter period. The general balance sheet, therefore, when accurately compiled and properly interpreted, furnishes a better measure of security of principal than current earnings, which frequently are the result of temporary conditions.

The balance sheet is arranged in two columns, technically known as "assets" and "liabilities." The assets represent the debits of the business, or the various items of wealth it has been entrusted with and is responsible for. The liabilities represent the credits, or amounts credited to others. They include the liabilities proper, or debts owed to creditors, and the capital stock, surplus, and other proprietorship items which represent the excess of the total value of the assets over the sum of the

debts. Thus the asset side of the balance sheet sets forth the kind of wealth owned and its value, while the liability side shows in a sense how the ownership of that wealth is apportioned between the creditors and the stockholders.

The usual form of balance sheet divides the assets into four classes, namely:

1. Capital, or fixed, assets, representing the fixed or permanent investment in the property.
2. Current assets—cash and the goods which are manufactured or bought and sold or held in the regular course of operations.
3. Deferred charges, representing expenses paid before they have been actually incurred.
4. Certain assets of an intangible nature, such as good-will, patents, franchises, etc.

Some of the assets are set aside in special funds out of profits or otherwise for specific purposes, as sinking funds to meet, for example, outstanding bond issues.

On the liability side a similar classification prevails, namely:

1. Capital, or fixed, liabilities, including the capital stock and funded debt which remain fixed for a number of years at least.
2. Current liabilities, including floating debts which have to be paid off in the ordinary course of operations within a short period.
3. Reserves, which are but deductions from the proprietorship and which represent loss of values through depreciation of assets or expenses which have been incurred though not yet paid.

Fixed Assets

Fixed, or capital, assets are the general equipment with which the company does business, consisting of real estate, plant, machinery, etc. They are the items which remain permanently in the business and are not held to be converted or liquidated into cash. Expenditures for these fixed assets are the capital expenditures referred to earlier in this chapter. These were made in acquiring or completing the plant and equipment of an enterprise with a view to placing the business on a revenue-earning basis. The term "revenue expenditure," on the other hand, comprises all expenses against profits or revenue.

The differentiation between capital expenditure and revenue expenditure depends, therefore, on the purpose of the outlay. If the outlay is such that it adds to or improves the plant or equipment of the business, and thus increases its capacity to earn revenue, it is charged as capital expenditure. Otherwise it is charged as revenue expenditure.

Model Balance Sheet

Following is a model balance sheet. Apart from the item of deferred charges, the assets are grouped into two classes, fixed and current, and the items in each class are arranged in the order of their relative liquidity, or the ease with which they can be turned into cash, beginning with the least liquid. Not all concerns follow this order, some preferring to arrange the assets in sequence according to the relative convertibility into cash through sale or exchange. The latter plan is particularly desirable when winding up the concern's affairs or otherwise liquidating its property. A balance sheet which shows primarily cash or liquidation values is termed a "statement of affairs."

Balance Sheet

Assets

Fixed:		
Plant	$........	
Real Estate and Buildings	....	
Machinery	....	
Other	....	
Permanent Investment	....	
Good-will, Patents, etc.	....	
Total Fixed Assets		$.......
Current:		
Inventories	$........	
Bills Receivable	....	
Accounts Receivable	....	
Cash	....	
Total Current Assets		....
Deferred Charges, etc.		....
Total Assets		$.......

Liabilities

Fixed:		
Capital Stock	$........	
Bonds Outstanding	....	
Total Fixed Liabilities		$.......
Reserves		....
Current:		
Notes Payable	$........	
Accounts Payable	....	
Total Current Liabilities		....
Deferred Liabilities		....
Surplus		....
Total Liabilities		$......

Valuation of Fixed Assets

Fixed assets, as a rule, are valued in the balance sheet at cost, regardless of their intrinsic value. The reason for this is obvious. They have been acquired and are retained, not with a view to being sold at a profit in the ordinary course of business, but to being used in operating the business until they are worn out or discarded for some other reason. Fluctuations in value of fixed assets need only be considered when there is a change of ownership of the business. A revaluation is then in order.

If assets tend to depreciate or deteriorate through wear and tear, inadequacy, or obsolescence, it is assumed that such losses are provided for out of current revenues or earnings, and as charges of this character do not increase the amount of investment they are logically classed as revenue expenditures.

The valuation of current assets follows the rule, "cost or market value, whichever is the lower." This means that if any of the current assets have declined in market value below their cost to the business, the difference between the market value and the cost is a loss that is to be charged against current earnings. It has already been shown that the essential feature of current assets is that they are intended for conversion into cash through sale or otherwise at the earliest opportunity. Hence, their market price is an important factor in their valuation. However, the theory governing accounting is that no profit can be realized until property or goods are actually sold, and it is therefore not safe to increase the value or to take credit for any profit thereon until a sale or segregation has been effected. Accordingly, no appreciation in the value of any assets should be brought into the accounts because of a rise in their market value,

unless they are disposed of and the profit is actually realized.

Working Assets

The relative amount and kind of the free "working," or "liquid" assets, i.e., cash or cash equivalents, of any organization, requires in many cases closer observation and analysis than the property accounts, or fixed assets. It is with the current assets that an enterprise meets its current needs, paying its current expenses and obligations. If the working assets do not suffice for this purpose the company must be able to borrow additional funds to avoid financial embarrassment. A receivership might result, therefore, even when the value of the fixed assets is in excess of that of the actual liabilities, or when the net earnings are sufficient to cover interest on funded obligations.

Liquid assets are thus a part of the necessary working machinery of any business organization. When the amount on hand is depleted, it must be replenished by borrowing or by reduction of wages or costs of upkeep and other necessary expenses and charges. Wage-cutting, however, may lead to costly labor difficulties, and reduction of necessary expenses may impair the company's credit, rendering impossible the securing of new capital required for improvements and extensions. Need for working capital arises mainly from the expenditures for materials and supplies, wages, taxes, and the like, and also from expenditures for upkeep, improvements, and extensions caused by business expansion.

Among the working assets, in addition to cash and money owing to the business, are included the inventories on the finished goods, materials and supplies, and the readily marketable securities. The items requiring first

consideration, however, are cash and accounts receivable. The size of the cash balance together with other items readily convertible into cash, when compared with the current requirements and the amount of construction work on hand, may indicate roughly whether or not additional financing through sale of securities is necessary. The borrowing of additional funds has a direct influence, in some instances favorable and in others unfavorable, on the market value of securities already outstanding. Financiers and investors, therefore, scrutinize closely the cash position of a debtor concern. It is frequently the best available gauge of financial status.

Adequacy of Working Assets

A common method of determining the relative adequacy of the working assets is by contrasting these items with the corresponding working liabilities, or current obligations on the opposite side of the general balance sheet, which generally comprise all the liabilities in the general balance sheet except capital stock, funded debt, reserves, and surplus. This comparison may be done in the following manner:

Working Assets:	
Cash Balances	$ 8,000,000.00
Accounts and Balances Receivable	13,000,000.00
Materials and Supplies	6,500,000.00
Total Working Assets	$27,500,000.00
Deduct: Working Liabilities	10,500,000.00
Net Working Assets	$17,000,000.00

The item of net working assets, or net working capital, as it is called, is the reserve force in operating a business. It is, therefore, the leading factor in the test of financial strength.

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CHAPTER III

THE FIELD OF INVESTMENT

Classes of Credit

In the preceding chapters the development and fundamental principles of investments were discussed. The more concrete topic, the field of investment, will now be treated. This involves a discussion of credit, because investment is essentially a form of credit. It has already been stated that an investment involves the temporary transfer of value, which may consist of concrete goods, a fund of capital, i.e., money or securities, or a mere right or privilege, and which, for purposes of exchange or transfer, is computed in terms of money. Almost all forms of credit likewise represent a transfer of value by one or more persons to the possession and use of others.

There are two general forms of credit: commercial credit and investment credit. These are handled by the two leading types of banking institutions: viz., the commercial banks, or banks of discount and deposit, and the investment banks. It is the function of both classes of institutions to furnish credit. The banks of deposit and discount are mainly concerned with commercial, or short-term, credit. Investment banks, on the other hand, are mainly concerned with long-term, or capital, credit.

Commercial Credit

When a client comes to a commercial bank for a loan he is immediately asked concerning the purpose of

the loan. The reason for this is that the transaction for which he desires commercial credit should be of a self-liquidating character. It should be based on the purchase and sale of goods or services, or on the conversion of goods and materials into forms which make them readily exchangeable for cash. Thus the main business of commercial banks is to grant loans to manufacturers and merchants. When a merchant borrows money to buy goods he is expected to dispose of all or part of these goods during the period in which the loan matures. If a manufacturer borrows money to buy raw materials to turn into finished articles he is expected to complete their manufacture and market them in time to pay off the loan when due.

This, however, is not always required in actual practice. Certain manufacturers and merchants have with banks what is known as a "line of credit." They possess sufficient financial resources to be able to borrow on their general security. In some cases the borrower's general resources are the primary basis on which he gets a commercial loan, while in other cases they are given second consideration. In connection with the latter the bank generally demands special security, which is based on actual values, i.e., commodities, goods, or wealth, or takes some form of guarantee that the loan will be repaid at maturity.

The national banks created under the National Banking Act are commercial banks. They together with many of the same class of state banking institutions are members of the federal reserve system, which performs for them the same service as they perform for their customers. That is, the twelve federal reserve banks grant them credits through rediscounts or advances which are based mainly on commercial transactions or

are secured by actual commodities, and which have a maturity of six months or less. In short, the purpose of commercial banking is to furnish borrowers the use of cash for the purchase, sale, or manufacture of goods which in a few months will be disposed of and reconverted into cash, the basis of this short-term credit being the borrower's liquid assets, or assets that can be readily exchanged for cash.

Long-Term Credit

The basis of long-term, or "capital," credit, as economists call it, is the permanent or fixed assets in the borrower's possession. These fixed assets are not intended to be turned back into cash but to be used up in operation. The railroads, for example, borrow money heavily for the construction of new lines and branches. Funds used for this purpose are permanently sunk and cannot be withdrawn. When once constructed, railroads may be considered as a part of the soil on which they rest. Yet railroad securities representing money borrowed for construction purposes constitute a common form of credit. Such securities may be issued to mature in long or short periods. One issue, that of the West Shore Railroad, covers almost five hundred years from date of issue to date of maturity. Buildings, machinery, ships, pipe lines, and other parts of a business concern's equipment, are likewise not acquired for the purpose of sale and reconversion into cash, but are intended to remain in the business. The more permanent and durable they are, the better basis they are as a security for a loan of long-term credit.

As has been pointed out, the proportion of liquid assets in the possession of a business concern has an important bearing on the soundness of its securities as

long-term investments. This, however, has no direct reference to the safety of the principal, but rather to the stability of income, because periodical interest payments on bonds or other long-term obligations must be made in cash. It is, therefore, a cardinal principle of sound finance that every concern which borrows on the basis of its fixed assets should have available a certain amount of liquid, or working, assets with which to pay the periodical interest requirements.

Forms of Short-Term Credit

It is the intention here to point out only a few of the forms of short-term and long-term credit. The primary type of short-term credit is the open account. This involves merely the transfer of funds or other values to another party with no other security than the statement in the ledger that such a loan or sale on credit has been made, or such a service has been rendered, for which payment will not be received until some time in the future. The open account is a very common form of credit in almost all lines of business. A good example of it is the bank deposit. A depositor puts money in the bank and receives in return the right to demand it at any time during banking hours. He is thus giving credit to the bank. The money on deposit becomes the property of the bank, the depositor merely having the right to claim from it an equivalent amount.

Another form of commercial, or short-term, credit is the promissory note. This is a written promise to pay a sum of money on demand or at a fixed date which is given by the borrower to the creditor. It is the commonest form of negotiable commercial credit in the United States, though a movement has recently been started to curtail its use by substituting the so-called

"trade acceptance," and "banker's acceptance." While not exactly like the promissory note, the trade acceptance is essentially a similar form of credit. It is an order of one party, the seller, on another party, the buyer, to pay the former or some third party a specified sum at a specified time and place. The drawee or buyer usually indicates his acceptance of the order by writing the word "accepted" across the face and affixing his signature, thereby making himself liable on the draft. The bank acceptance is drawn on a bank, which agrees to pay the stated amount. The bank accepts in return for a fee, thus lending its credit to a borrower, who usually agrees to furnish the bank with the funds it will need to meet the acceptance at maturity.

Forms of Long-Term Credit

Long-term credits comprise principally real estate loans and bonds. Like ordinary promissory notes they may be secured or unsecured. Thus, they may have a mortgage lien or a pledge of valuable collateral for security, just as a three months' note may be discounted by a bank against the deposit of collateral in the shape of warehouse receipts, bonds, and shares of stock. Or they may be represented by a simple certificate or acknowledgment of debt without any pledge of wealth or a specific equity in any property.

Outwardly, therefore, a capital credit cannot be distinguished from a commercial credit. The purpose and the duration of the loan are the distinguishing features. As a rule commercial banks do not lend money for more than six months. Long-term credit may, therefore, be considered as a loan of an original maturity of more than six months. However, there is no fixed period of time by which commercial credit may be distinguished

from capital credit. The duration of the credit is determined largely by the nature of the transaction involved in the credit. For example, when money is loaned to a manufacturer to enable him to work up raw materials into manufactured goods, the period required for the process will be the term of the commercial credit. Credits running longer than a year are generally considered capital credits, though in some cases commercial credits extend for over a year.

The Real Estate Loan

The best known form of capital credit, as stated in the first chapter, is the real estate mortgage, or a loan secured by real estate. This form of investment came into the field before the others and it is still popular. Under real estate mortgages may be included the farm loan bonds and other mortgage certificates based on land and buildings. The participating certificates which bond and mortgage trust companies issue against a number of individual real estate mortgage loans which they have made are likewise to be classed as real estate loans.

The Investment Bond

The principal form of long-term, or capital, credit is the investment bond. This may be a plain certificate acknowledging indebtedness and carrying no lien; or it may have the security of a mortgage, deed of trust, or the pledge of specific property for the purpose of insuring the payment of the obligation. The various classes of bond issues will be discussed in the next chapter.

From a legal and economic standpoint there is very little difference between the real estate mortgage loan and the investment bond. Fundamentally they are the

same. There are, however, some important practical differences between them. The ordinary real estate mortgage is a loan made on the security of real estate. The right is given the investor or holder of the mortgage to levy on the mortgaged property to enforce his claim for the interest and the principal of the debt. Formerly, when property was pledged for a loan its legal ownership was transferred to the lender, though the borrower still had possession of it. Nowadays, however, the borrower retains the legal ownership as well as the possession of the mortgaged property, so long as he meets the obligations of his mortgage contract.

Real estate mortgages, as a rule, are for small amounts as compared with modern corporation and municipal bond issues. They are usually transactions between two individuals or corporations and are not readily negotiable by mere passing of the certificate representing the claim to the indebtedness. The loans are generally limited to periods of from one to five years. Because of these characteristics they are not adaptable for easy and general distribution. There is no broad market for them because the value of the real estate is generally known only in the immediate locality. Moreover, the factors affecting real estate values are many and of a fortuitous nature so that there is no very reliable means of properly judging the elements of security they afford. It is also impossible as a general rule to determine the margin of safety behind real estate mortgages, as it is in the case of the other forms of investment.

Real Estate Mortgage Certificates

Recent years have witnessed the rise of large real estate mortgage trust companies, which lend money on a number of individual parcels of mortgaged property

and issue their own certificates secured by ownership of the mortgage, thus giving the holders an equity in the mortgage and at the same time guaranteeing the principal and interest. In return for that guarantee the companies demand a certain income for themselves. For example, if they receive 5 per cent annually on the mortgages, they sell the certificates to investors at a price that will yield them an income return of 4½ per cent, taking the remaining ½ per cent as a return for their guarantee and the other services they render to the purchasers of the certificates.

The companies have overcome another disadvantage attached to the mortgage loan. A real estate mortgage can be for any amount from $100 to $10,000,000 or more. There may be relatively few individuals that would be willing or able to furnish funds equal to the exact amount of the mortgage. The mortgage trust companies take over a single large mortgage and issue participating certificates against such mortgages in round amounts of $100, $1,000, or $10,000. They virtually divide the individual mortgages into many parts bearing their guarantee and give them a wide distribution among investors.

Farm Loan Bonds

Within the last decade the farm loan bonds have been developed as an improvement on single farm mortgages. They are bonds issued by the joint-stock land banks and the federal farm loan banks. Both these classes of institutions are under the jurisdiction of the Federal Farm Loan Board and are supervised in much the same way as the federal reserve banks and national banks. The land banks lend to farmers on mortgages, on the security of which they in turn issue their own

bonds. In this way the risk of the individual lender is greatly minimized. Furthermore, the loan is divested of its local nature because the holder of a federal farm loan bond or a joint-stock land bank mortgage bond need not be concerned with the location of the mortgaged property. By distributing these loans over a considerable area the banks relieve the investors of the risk they would run if they made their loans on single mortgages. They thus follow the wise policy of distributing their investment risks, precisely as fire insurance companies observe the principle of not accepting too many hazards in one locality.

Stocks and Bonds

Another distinction to be made among the various forms of investment is that between stocks and bonds. A share of stock is a certificate of proprietorship in a corporation, while a bond is a certificate of indebtedness of a corporation, representing a claim against it for value received. The owner of a stock certificate is one of the proprietors of the company that has issued it, and he occupies a legal position somewhat similar to that of a partner in a firm. On the other hand, a bondholder, who has simply loaned money, has a creditor's rights and privileges. This is the principal legal distinction. However, because of the many and varying conditions under which both bonds and stocks are issued it is no longer sharply drawn. Some classes of stock give their holders certain rights of creditors, and some bond issues give their owners certain rights of proprietorship.

There are various kinds of stock, each giving the holder certain definite rights of ownership and control. One class may confer on him no benefits other than participation in the profits. Preferred stock, for example,

generally gives holders a preferential right in the payment of dividends and frequently in the distribution of the assets in the event of liquidation, but in many cases it gives them no voice in the affairs of the issuing corporation. Thus the preferred stockholder may be essentially a creditor of the company.

There is another important distinction between stocks and bonds. Stocks as a rule do not furnish the security of income or principal afforded by bonds. A company is under no obligation to pay a fixed or a periodical income on its common stock. Stockholders may be deprived of a return on their shares for a prolonged period. The same is true of most preferred stocks. As a rule, all claims for taxes and interest on debts must be met before stockholders receive any portion of the earnings, so that ordinarily income on a stock is not nearly as stable as income on a bond. Neither is there ordinarily the same security of principal, because the stockholder has no mortgage or pledge of property. He cannot exercise the ordinary rights of a creditor in case the company whose stock he holds has defaulted on its contract under which the stock was issued. The holder of a bond, in return for his limited income return, is given certain preferences as a creditor in the distribution of the assets in case of bankruptcy or dissolution. Moreover, he can cooperate with other bondholders to take legal proceedings to enforce the contract for the payment of periodical income and a return of the principal when due.

Legally, the capital stock of a corporation represents the fund subscribed by the proprietors, the stockholders, or shareholders, for the purpose of enabling it to conduct its business and to obtain credit. It is the vitalizing element in the corporation, its life-blood. Though the corporation is theoretically liable to shareholders for the

money value represented by the stock, the liability cannot be enforced as long as the corporation is a "going concern."

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CHAPTER IV

CLASSIFICATION OF INVESTMENT BONDS

Bases of Classification

Investment bonds are variously classified, the classification depending upon which of the following is considered the most important for the purpose in mind:

1. Character of the debtor concern.
2. Security of the bond.
3. Priority of the mortgage lien.
4. Provisions for repayment.
5. Interest payment.
6. Special privileges to the bondholder.

1. Character of Debtor Concern

The commonest classification used by banks and investment houses is that based upon the character or business of the debtor or maker of the bonds. In general there are only two main divisions in this classification: bonds issued by government or civil organizations, and bonds issued by business organizations. Some corporations do not fall in either class. Such are charitable organizations, clubs, etc., which at times issue interest-bearing securities. They are, however, relatively few in number and their obligations are not usually negotiated outside of the membership of the organization unless their value is based on income-producing property. Accordingly, the obligations of private institutions are generally excluded from investment bond classifications.

Civil Loans

The first division in the above classification, the civil loans, comprises all governmental issues, i.e., the certificates of indebtedness of a nation, or a state, county, or other so-called political subdivision, which may be merely a prescribed geographical area, such as a drainage district, a school district, or any other political association which may be legally authorized to levy taxes and issue bonds.

Bonds Issued by Business Organizations

Among the bonds of business corporations are those issued by railways, steamship companies, public service companies, manufacturing concerns, and all enterprises that are conducted for profit. Glenn E. Plumb, the attorney for the Railroad Brotherhoods, in his plan for railroad operation proposed that railways should be conducted for service and not for profit. He, therefore, would remove them from the class of business corporations.

Public Utilities

Public utilities, also known as "public service corporations," are very similar to railways. The distinctive characteristic of both these types of enterprises is that they operate under a legal grant of authority or privilege to exercise some public function or to furnish a public service. This grant or privilege is known as a "franchise." Organizations which must operate under a franchise, whether the grant is direct or implied, are included among the so-called public service corporations. The importance of a public service company's franchise in determining its earning power and the investment merits of its securities is discussed in Chapter IX.

Industrials

The bulk of the securities of ordinary business organizations belong to the class commonly known as "industrials." They are issued by manufacturing, distributing, mercantile, real estate, and financial enterprises. The securities of mining companies are also generally included in this class. In fact, the securities of any concern organized for purposes of profit, and not required to operate under franchise regulations, may be called from an investment viewpoint "industrials." Financial corporations that are also fiduciary in nature, such as banks, trust, title, and insurance companies, should be placed in a separate class, since they conduct a business that is subject to special public regulations. There are special groups of business corporations that may be kept separate from the general class of industrials. Steamship companies, for example, are not as a rule classified as public service corporations, though some operate under a franchise and are also under restrictions and regulations as to rates and practices similar to those under which street car companies or railroads operate.

2. Security of the Bond

For the purpose of studying investment bonds, other classifications are necessary besides the one based on the character of the debtor corporation. A classification based on the nature of the obligation is important. Thus a bond may constitute merely an acknowledgment of indebtedness to the holder. It then represents but a promise of the debtor to pay the periodical interest on certain dates and the principal when due. It is known as a "plain" bond, or "debenture," and does not differ essentially from an ordinary promissory note. In England such obligations are the common form of invest-

ment bonds, relatively few mortgage bond issues having been put out by British corporations.

American investors generally demand some hypothecation, pledge, lien, or priority of payment in the case of an investment bond. This additional security usually consists of a prior claim or some legal title to special property granted to the bondholders collectively. Such priorities or rights can be enforced against the debtor if the terms of the contract under which the bonds are issued are not carried out. From the viewpoint therefore, of special security to the bondholder, there are but two general classes of bonds: plain bonds, or debentures, and secured, or mortgage, bonds. The lien or hypothecation of the latter may be a mortgage on real estate or on personal property, or on both. The legal distinction between realty and personalty is discussed in Chapter VIII (page 99).

Collateral Trust Bonds

An important class of bonds, known as "collateral trust" bonds, has come into great popularity in recent years. These bonds are secured by a deposit of personalty in the form of securities, consisting of either bonds or stocks, or both. A collateral trust bond constitutes, therefore, a loan similar to that made by a bank which has received securities from the borrower as collateral. The important difference between collateral trust and mortgage bonds is this: In the case of the mortgage bond the hypothecated property is left in the possession of the mortgagor, or debtor; in the case of the collateral trust bond the pledged property is given over to the possession of a third or disinterested party, viz., the representative of the bondholders, commonly known as the "trustee." The income and other rights,

however, attaching to securities pledged under a collateral trust bond usually remain with the debtor. The investment value of collateral trust bonds depends, first, upon the character and intrinsic value of the pledged securities, and, second, upon the general credit and financial standing of the company issuing the securities. As a rule the terms under which collateral trust bonds are issued require a guarantee or undertaking on the part of the debtor concern to pay both interest and principal regardless of whether or not the pledged securities can be sold or otherwise disposed of at a price sufficient to cover the principal amount of the bond issue. Every precaution, however, is usually taken to maintain the intrinsic and market value of the collateral.

Guaranteed Bonds

Another class of bonds that has become quite common is known as "guaranteed" bonds. They are similar to indorsed notes, having the guarantee of a third party. The guarantee may apply to the payment of interest or of principal, or of both. The Pennsylvania Railroad Company, for example, has guaranteed the bonds of the various corporations it controls or is interested in financially. Its indorsement of these issues has enhanced their market value and intrinsic merits. Somewhat similar to guaranteed bonds are the so-called "assumed" bonds, representing issues the liability for the interest and principal of which has been assumed by a corporation other than the original obligor.

3. Priority of the Mortgage Lien

The foregoing classes constitute the principal or fundamental types of bonds, which are distinct from each other. Those which follow combine in themselves

characteristics or conditions of two or more of these fundamental types. In other words, they are not mutually exclusive. Thus a government bond may be a mortgage obligation, while an industrial bond may be without any mortgage feature whatsoever. Moreover, a collateral trust bond may have, as additional security, a direct mortgage on physical property, and a mortgage bond may be secured by pledge of stocks and bonds.

This and the following classifications are limited largely to bonds that have a lien, inasmuch as they are based on the nature of that lien. There are many kinds of liens and mortgages represented by investment bonds, each of which has a different name. The investor, however, should not be deceived as to the nature of the lien by the name of the bond. A railroad company, for example, can issue a bond under the name of a "first and refunding mortgage," which may be a first mortgage on but a very small part of the property and an inferior mortgage or lien on the remainder. A corporation can give a bond any name it desires, as there is no legal restriction on the use of names.

Technically, a mortgage bond is an obligation that is secured by the hypothecation of specific property or franchises, or both, which, in case of non-payment of principal or interest or default in any other agreement made with the bondholders by the maker of the bonds, gives the bondholders a claim prior to that of the other creditors. Thus, in the event of default or of bankruptcy, a first mortgage bondholder is presumed to have a first and prior claim on the equity in the property pledged under the lien of the bond. His right in this respect is superior to the right of the creditors of the corporation holding inferior liens, such as second, third, or fourth mortgage bonds. A first mortgage may be a

first lien on the whole property of the issuing corporation or on a specific part; but in so far as the holders of the first mortgage bonds have a superior claim, they can collectively take legal action to enforce that prior claim in case of default. The Erie Railroad has as many as seven mortgages on certain parts of its main line of railroad. The respective rights of priority of the holders of each class of these mortgage bonds are defined in the contract under which the separate securities have been issued.

Deed of Trust

The rights and equities of the mortgage bondholder are contained in a written instrument known as the "deed of trust," "indenture," or "mortgage." Every holder of any class of bond, if he wishes to know the exact nature of his security, must consult the deed of trust. This legal document is a contract between the corporation issuing the bonds and a trustee acting for and in the name of the bondholders. The trustee is generally a trust company or a banking house, although individuals may also act in this capacity.[1]

Under the terms of the deed of trust the corporation conveys and assigns to the trustee all of the property, franchises, and other possessions upon which the bonds are to be a mortgage. The deed also specifies the amount of bonds and the conditions under which they may be issued. It contains, moreover, a description of the property to be mortgaged, so that it may be readily identified. There are also provisions that the property is to be kept insured and in good repair. There may be other important stipulations designed to protect the bondholders.

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[1] For a fuller description of the deed of trust, see Chapter VIII, page 102.

It is usually specified that if default is made in the performance of any agreement contained in the deed of trust, such as the failure to pay interest upon the outstanding bonds, the whole amount of the principal becomes due and payable at once. The consent of the holders of a specified majority of the bonds is usually required to determine whether the terms of the deed of trust should be enforced or whether the mortgaged property is to be sold or disposed of for their benefit as creditors.

"Open-End" Mortgage

The mortgage securing a bond issue may be limited to a maximum amount or it may be "open," i.e., without any definitely set limit. As a rule, a definite amount of dollars is stated as the maximum of bonds that can be issued under the particular lien. Some issues, however, fix no definite amount, but limit the total to so much per mile in the case of a railroad, or to a certain percentage of the sums spent to improve and extend property and equipment, or to an amount bearing a stated ratio to the stock outstanding or some other issues of bonds to be redeemed or refunded. Such mortgages are frequently called "open-end" mortgages.

Consolidated and General Mortgage Bonds

There is a large class of mortgage bonds known as "consolidated mortgage" bonds, which came into being when separate and individual mortgages on the property were consolidated and new bonds were issued to take the place of the old. This class of mortgage bonds is common among railroads and public utilities. Another common type of mortgage is known as "general" mortgage, "general and refunding" mortgage, or "blanket"

mortgage, the lien of which covers all the property of the corporation, including the parts already subject to other prior liens.

Many of the present mortgages have a clause in the deed of trust known as the "after-acquired property" clause, which stipulates not only that the property actually owned or held at the time the bonds are issued, but also that all the property afterwards acquired will be placed under the lien and become subject to the mortgage. Sometimes the provisions of the clause apply merely to property acquired through funds obtained by the sale of the bonds. In other cases they apply to all property which may be acquired after the date of the mortgage.

Refunding Bonds

The refunding mortgage, as its name implies, is a mortgage issued for the purpose of refunding other indebtedness. Each issue of mortgage bonds, as a rule, has a maturity date signifying the time when the principal of the debt is due. A corporation having several bond issues with different maturities is under the unpleasant necessity of frequent and perhaps costly refinancing. In order to avoid this piecemeal refunding, a single large issue of general and refunding mortgage bonds is created. By means of this refunding, a mortgage which is an inferior lien may in time become a first or a second mortgage on some or all the property. It may at one and the same time represent a first lien on one part and a second or inferior lien on another part of the corporation's property.

The comparative value of the bonds issued under such conditions depends greatly upon the character of the lien, and it is not at all surprising that the various

mortgage bonds of the same company which have the same rates of interest will sell at large disparities in price and income yield. The Consolidated Mortgage 4 per cent Bonds of the Pennsylvania Railroad Company, for example, sell at a higher price relative to the income or investment yield received than the same company's general mortgage bonds, because the lien of the first issue is prior and superior to that of the latter. This means that the holder of consolidated mortgage bonds in the event of default, bankruptcy, or liquidation, has a claim on the assets, franchises, and earnings of the company superior to that of the holder of the general mortgage bonds.

4. Provisions for Repayment

A fourth classification of investment bonds relates particularly to the provision for the repayment of the principal. It has been pointed out that some foreign government bonds have no maturity. In this country there are a few issues which extend over a long period before the principal can be demanded. Thus the West Shore Railroad bonds have been issued to run for four hundred and seventy-five years. Several other roads have bond issues extending over a period of one hundred years or more. These, however, are rare cases. Perpetual bonds, though a common form of government indebtedness in Europe, are not generally issued by corporations. This, no doubt, is because no corporation can be expected to live eternally, although it is immortal according to the legal concept. If a holder of a bond wants to convert the principal into cash at some time, he can ordinarily do it only in two ways: by collecting it at maturity, or by disposing of the obligation through sale in the market. There are, however, many in-

stances in which corporations have "called in," i.e., extinguished, a long-term debt in advance of maturity.

Sinking Fund Bonds

Both civil organizations and corporations issue obligations, known as "sinking fund" bonds, which are sold under the agreement that the debtor will, in addition to making the periodical interest payments, set aside at regular periods a certain amount toward the payment of principal of the bonds at maturity. Such sinking fund payments are as obligatory as the payment of interest, and if the debtor corporation fails to make them, the bondholders may usually exercise the same legal rights as when the debtor fails to pay the interest.

Sinking fund bonds are an indispensable form of obligation in the case of coal and other mining concerns whose capital assets exhaust themselves in the regular course of operations. With companies the value of whose assets remains intact, a sinking fund is not so important. For example, railroads do not generally issue sinking fund bonds, since railroad property is practically as permanent as the ground on which it is constructed. But mining corporations, ship companies, steel manufacturers, and other concerns having property that tends to depreciate or decline in value with use, are required to issue sinking fund bonds in order to place their obligations on a sound investment basis.

Mining companies extract their original investment from the ground in the course of operations. Hence they usually contract in the deeds of trust under which their bonds are issued to set aside as a sinking fund an amount proportioned to the quantity of ore or coal extracted. Shipping companies, whose investments are mainly in ships constituting large units of property that

are likely to become obsolete and useless and demand replacement "in bulk," are generally required to maintain sinking fund reserves to offset the loss of value in their assets, as otherwise the intrinsic value of the bonds secured by these assets would tend to become impaired. Without sinking fund provisions such bonds would decline in market price, unless the general credit of the debtor corporation was of sufficiently high standing to assure bondholders of the payment of the principal when due. The same is true of steel manufacturing and other industrial corporations.

Serial Bonds

"Serial" bonds are issues which are retired in instalments at definite periods. Accordingly, different portions of the same issue have different maturity dates, and the total is retired in instalments. The purpose of serial issues is very similar to that of the sinking fund bonds. Instead of creating and maintaining a sinking fund reserve to pay off its obligations, a corporation or municipality agrees to redeem its bonds in serial order, a certain portion coming due and being payable each year until the whole amount is retired. Each certificate of such bond issue has its definite maturity date.

A New York banking institution in 1919, for example, offered to investors two separate issues of bonds of the same steamship corporation, one a serial bond issue, and the other a sinking fund bond. In the case of the serial issue certain specified proportions of the total bond issue had different maturity dates. Thus, one-fourth was to mature in two years, one-fourth in three years, and the same amounts in four and five years, respectively. In the case of the sinking fund issue the bonds were to come due five years after issue, but the

company was to set aside periodically a certain fund sufficient in the aggregate to meet the maturity of all of the bonds of the issue. The money that was set aside was no longer the property of the company but was held by the trustee or some other party for the benefit of the bondholders.

Market conditions frequently determine whether it is better to put out sinking fund or serial bonds. If the public desires long-term bonds, corporations, cities, and states will find it easier to dispose of sinking fund bonds. On the other hand, if the money market is in such a condition that most investors desire short-term maturities, borrowers will find a better market for serial bonds. A further discussion of the respective merits of serial and sinking fund bonds is found on page 89 in connection with municipal trust obligations.

5. Interest Payment

Another classification of investment bonds is based on the obligations assumed by the debtor with regard to interest payments. Most investment bonds carry a fixed interest rate, payable usually semiannually. If the interest is not paid as agreed, there occurs what is termed a "default." If the default continues after a specified period the bondholders may sue to foreclose on the property. These fixed interest obligations constitute the bulk of investment bonds.

Income Bonds

There are, however, issues known as "income" bonds wherein the debtor does not agree to pay a definite rate of interest to the holders, but a rate contingent on certain conditions, such as the amount of net revenue, or the surplus earnings available for interest. Some

income bonds are issued under provisions very similar to those relating to preferred stocks. If the full interest is not paid on one interest date it accumulates and the accumulation is in the nature of a liability of the corporation, to be paid before any dividends or profits can be distributed to stockholders. Such an income bond is said to be cumulative. There are also income bonds that are non-cumulative. If a holder of such bonds fails to receive interest during any period when it is not earned, he loses the right or claim to the payment entirely.

Income bonds are not very popular with investors. They are generally issued in the readjustment of the finances of a business enterprise or when a corporation is reorganized after bankruptcy. On occasions of this kind the holders of defaulted bonds of the bankrupt concern may be required to accept an income bond in the newly reorganized corporation in lieu of the old bonds which are canceled. Thus, the Third Avenue Railway of New York City issued income bonds in 1911 under such a plan for the readjustment of the finances of the company. The New York Railways, the Hudson and Manhattan Railroad, and the St. Louis–San Francisco Railroad also have similar income and adjustment bond issues outstanding.

Income bonds may be issued under the condition that the debtor concern must distribute to the bondholders the portion of its earnings that is available for the payment of the interest up to the maximum rate fixed in the issue. There are other issues that leave the decision of this distribution to the directors of the debtor corporation. In any event, it is generally provided that no dividends are to be paid on capital stock unless full payment on the income bonds for the period has been

made. In this respect income bonds resemble preferred stock. Income bonds whether cumulative or non-cumulative may be mortgage, collateral trust, or merely plain bonds. The reader is again reminded that the bond classifications adopted here are not mutually exclusive. Each is based on a separate viewpoint and relates to a particular feature of investment bonds.

6. Special Privileges to the Bondholder

The privileges granted by debtor concerns to their bondholders, either directly or indirectly, are various and in many instances quite peculiar. An important privilege nowadays is the exemption of taxation of the income received from the bond. Because of it, the holder of the bonds is assured of a regular fixed income, which, as was pointed out in Chapter I, is one of the two important factors that enter into all sound investments.

Another privilege attached to certain bonds is the right of the holder under certain conditions to exchange them for other bonds or for the stock of the debtor company. These are known as "convertible" bonds. The convertible feature is a part of the debt contract, but the exchange is usually made optional with the bondholder. Moreover, the conversion privilege is usually restricted to a fixed period and can be availed of generally at a definite rate of exchange. Thus, a $100 par value of bonds may be convertible during a period of five years into a larger amount of stock, or the exchange may be made on the basis of $125 of bonds for $100 par value of stock. In a few instances, bonds have been issued with the provision that the holder may convert them at maturity into new securities. Each bond issue has its own specific terms of conversion. These should be fully known to investors.

Callable Bonds

In addition to bonds having a conversion privilege, there are also "callable," or "redeemable," bonds. In the case of such bonds the issuing company has the right of paying off the principal at some time before maturity, if it chooses to do so. When this privilege is exercised, the bonds are frequently paid off at a premium specified at the time the bonds are issued. Thus the corporation in return for the right to pay off the bonds before maturity must compensate the holders by an extra payment. Callable bond issues may be made redeemable in cash as a whole or in part. When the company has the right to call in a part of a bond issue, the selection is usually made by drawings, i.e., by lot, and payment is made at a fixed price known as the "redemption" price. The United States Steel Corporation Sinking Fund bonds are redeemable in this way at a premium of 10 per cent. A holder of these bonds has to surrender them whenever they are selected for redemption. He, however, always has the privilege of buying them again in the open market. Bonds redeemed by drawings very rarely sell in the market at a price above the redemption price.

Premium and Lottery Bonds

Two additional classes of securities little known in this country are the "premium" and the "lottery" bonds. Premium bonds are issues that are paid off in their entirety when due at an amount in excess of the face value. This may mean, for example, that the owner of a $1,000 bond on which 5 per cent interest is paid annually is entitled to receive $1,100 for his certificate at the date of its maturity, or whenever it is called for payment. There are comparatively few obligations of

this character in the United States, but there are many such issues in Europe, put out particularly by the governments. A notable example is the Government of France Peace Loan of 1920.

A lottery bond is a security bearing a definite number which, if drawn by lot, gives the holder, in addition to immediate repayment of principal, a prize in the form of a cash bounty. The gambling feature is paramount in lottery issues. Each year a certain number of bonds to be called in are drawn by lot and the holders of the drawn certificates are paid premiums of various amounts. One or more holders of bonds selected for redemption may receive many times the face value of the bonds. The prizes vary in a certain definite scale. It is an interesting fact that practically all the large French and Belgian internal municipal bond issues are lottery bonds. In this country advertisements of lottery issues are barred from the mails and from interstate commerce, and the bonds can, therefore, neither be marketed here nor brought into the country.

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CHAPTER V

NATIONAL GOVERNMENT BONDS

Distinctive Features

In the preceding chapter it was pointed out that from the standpoint of the character of the debtor, there are two general classes of investment securities; one consisting of government bonds and the securities of political subdivisions, which are known as civil loans, and the other consisting of the bonds of business organizations. It is proposed here to consider the principal and largest class of civil loans, namely, national government bonds.

There are several special features relating to government bonds, the most important of which may be outlined as follows:

1. As a sovereign nation cannot be sued, the security of government bonds is based on the ability and the willingness of the debtor to repay, unless another nation intervenes in behalf of its own nationals and enforces payment by "warship."

2. Government bonds are backed by the taxable resources of the debtor nation, it being presumed that the government has unlimited taxing power and is able to appropriate any portion of the resources within its territory for the payment of interest and principal on its debt.

3. A sovereign national government can borrow for any purpose, whether productive or non-productive. There is, as a rule, no question of *ultra vires* or of its

exceeding powers conferred upon it by some higher authority.

Government Debt Repudiation

The first point cannot be emphasized too strongly. National credit is based entirely on confidence. Generally speaking, there are no legal means of forcing a national government to repay, since it cannot be sued. Unless some special, extra-legal means are taken to enforce payment, such as physical force or the pledging of property, non-payment and repudiation of the debt means a loss to the investor. Instances of national debt repudiation are not uncommon. A number of South and Central American republics have become bankrupt and have failed at times to meet their debt obligations. Recent instances of debt repudiation are not lacking, notably, those of Russia and Mexico. Our own country is not free from the stigma. Some of the states have dishonored their obligations, taking advantage of the Eleventh Amendment to the Constitution under which they cannot be sued by individuals. In the next chapter, however, it will be shown that, even though sovereign, some states of the Union were indirectly forced by court decisions to meet their obligations.

In the case of corporation securities, enforcement of the loan contract is commonly in the power of the courts. Thus, a holder of the bonds, or his representative, can apply to the courts to levy on or attach the property of the corporation to obtain payment of interest and principal. On the other hand, the property or resources of a sovereign are not, except under special conditions, subject to seizure. There have been a number of instances of the use of physical force by foreign bondholders to obtain payment, particularly in the case of

small countries failing to meet their obligations. This is called "enforcement by warship." For instance, Great Britain on one occasion threatened to land soldiers in Nicaragua and seize the customs house to enforce the payment of a debt due her subjects, and was only stopped by the protest of the United States that such action would be in violation of the Monroe Doctrine. San Domingo is another case in point. In this instance the United States adopted the policy of acting as trustee for the purpose of satisfying the foreign bondholders of the little West Indian republic.

Taxing Power

Another distinction between government and corporation bonds is that the former are based on the government's taxing power, whereas corporation bonds are based on the earning power of the issuing corporations. In levying taxes the government seeks to obtain only sufficient revenues to meet its current requirements. A business corporation, however, aims to obtain as much profit as possible and to accumulate a surplus over and above the amount required to meet current expenditures and maturing obligations. A sovereign nation theoretically has the power to appropriate all the resources of its citizens within its territory. In the old French monarchial days the idea prevailed that the king owned all the property within his kingdom, which was merely entrusted to his subjects for his benefit, and that he could therefore levy taxes to the extent he saw fit.

In the United States the Supreme Court has held that the taxing power of the federal government is complete in so far as no direct limitations are placed upon it by the Constitution. The revenues of a government are determined by the extent of the national resources. But

if it attempts to collect a tax that is beyond the resources and annual income of the nation, it may do serious economic injury to the country. How far it is feasible to tax citizens for governmental purposes is a question of public finance, which need not be discussed in these pages.

Purpose of Borrowing

A national government can borrow for any purpose, and in this respect also does it differ from a corporation. It may borrow for a destructive purpose, as to make war, or for a productive purpose, as to build canals, railroads, irrigation systems, etc. That it should be able to issue bonds thus for either productive or unproductive purposes is an important matter from an investment viewpoint. It is quite as essential for an investor to know the object for which a government borrows money as it is to know the object for which a railroad or industrial company borrows money. For example, if a government borrows for purely non-productive purposes, as the building of museums and theaters, the securities will not be held in as high esteem as they would if their proceeds had been used in building a canal, or improving a drainage district, or for some other productive purpose.

Productive improvements may bring in a return to the government sufficient to pay interest and the principal of its indebtedness and therefore will not mean an additional tax burden to the people. The same fundamental principles are involved in government borrowing as in corporate financing. The investment merits of the securities of governments and industrial organizations are alike determined by the purpose for which the money is borrowed, the method followed in using it, and the general credit standing of the debtor.

Public and Private Credit

In spite of the fact that an individual cannot force a sovereign state to pay its debts, governments, as a rule, have a higher credit standing among their own citizens than private individuals and corporations. On that account they can borrow within their own territory at a lower interest rate than corporations, except in the case of unstable or revolutionary governments. Notwithstanding the present enormous debts of national governments, their securities sell, as a rule, at lower interest rates than the securities of business corporations within their own boundaries.

Government borrowing rates directly affect the interest rates on private borrowing. A private corporation is frequently compelled to meet the competition of government borrowing in its bid for investors' funds. If a government issues bonds at a high interest rate the business corporation must meet that rate. Thus, if it has been the policy of the government to borrow money at 3½ per cent, but in order to obtain funds it agrees to pay 5 per cent, business corporations will have to meet this increase to get the desired funds. The same is true of the volume of borrowing. If the government is a heavy borrower, industrial enterprises are forced to reduce their borrowings. During the last years of the late war private investment in Great Britain and France ceased because of the governments' heavy borrowings. In our own country private borrowing was restricted as a war measure. The Capital Issues Committee, provided for by act of Congress, had power to withhold from public sale new stock and bond issues.

Government borrowing has also an important bearing in the general economic situation. If done on a large scale it leads to currency inflation, which in turn results

in increased prices and higher cost of living. People can invest in large amounts of government securities only if they can secure loans from banks against the pledge of the bonds as collateral, and this borrowing gives rise to credit and currency expansion. In time the circulating medium exceeds the requirements of trade and becomes redundant. Practically all the great nations of the world, including our own and some of the former neutral countries, as Holland, Denmark, and Switzerland, which maintained large armies during the war and had to increase their indebtedness, have at present an inflated currency to which the high prices and correspondingly high wages are to be largely ascribed.

Development of National Indebtedness

National debts are a comparatively recent development. Until modern times governments paid for their ordinary needs and defrayed the costs of conducting wars from current revenues. The sovereigns were then assumed to have the right to levy at pleasure on property within their respective kingdoms, and their taxing power was unlimited. Moreover, they could readily make a profit by clipping or debasing the coinage of their realms. The first issue of what might be called government bonds was put out by one of the Italian cities in 1171. In that year the free city of Venice organized a bank, through which it issued certificates of indebtedness that passed as currency between its citizens and were accepted in payment of debts. Later other countries adopted similar expedients for raising emergency funds.

Until the period of the Napoleonic Wars government borrowing, however, was very limited. In France, before the Revolution, whenever the monarch was short of funds, he farmed out to individuals for a lump sum,

paid in advance, the right to collect certain future taxes. In this way he converted expected tax receipts into funds available in the present. Napoleon paid for his wars by levies on foreign peoples. The British government went heavily into debt in the wars it waged against him, and the British people were confirmed in their investment habits by their dealings in this national debt. When the Bank of England was chartered in 1694, the directors were required to subscribe to £1,200,000 of the government debt. From such small beginnings the business of government financing grew very rapidly. For two centuries the London Stock Exchange was engaged chiefly in trading in the British government debt. The English banking house of the Rothschilds greatly enhanced its wealth by dealings of this sort.

Peace Debts

After the Napoleonic era peaceful undertakings as well as war were responsible for the growth of national indebtedness. The nineteenth century was a period of great development and progress in public works, such as railroads, canals, drainage, and lighting, and national governments borrowed heavily for these improvements. In addition they made tremendous outlays for military and naval purposes. In this way government functions expanded and expenditures grew until they could no longer be met from current revenues. As public improvements, wars and armaments were also for the benefit of future generations, nations did not hesitate to borrow in order to shift a part of the burden from the shoulders of the present generation. Moreover, modern times have been propitious for public borrowing, since capital funds have accumulated rapidly and have sought investment. From the first, government bonds

became the most favored security in the whole investment field.

Investment Factors

It has already been pointed out that in lending to governments the same investment principles govern as in granting loans to business concerns. Not only should the credit standing of the debtor nations be considered, but their resources, the character and size of their populations, and the stability and character of their governments should also be taken into account. Investigation should be made of their outstanding indebtedness, in the same way as a bank makes inquiry into the outstanding indebtedness of a corporation before granting it credit. Thus, in studying the value of government bonds, the size and character of the debt in relation to the country's natural resources and population should be taken into consideration.

It will not suffice to take only one of the factors, resources or population. Both must be considered. An investigation of the resources without a proper study of the people is of little value when the question of the payment of interest and principal on the indebtedness is concerned. Resources embrace such items as the quality and fertility of the soil, the availability of minerals and other natural wealth, the volume of industry and trade, and such productive public improvements as railroads, canals, and other aids in the production and distribution of wealth. Similarly, the size and character of the population are very essential investment considerations. Are the people industrious? Do they follow a sound code of business morals? Are they capable of maintaining a stable government? These are but a few of the questions that must be answered when investi-

gating the investment quality of government securities.

When once a country repudiates its debt or otherwise fails to meet its financial obligation, its credit is impaired and it can borrow only with the greatest difficulty. Should the German or Austrian governments repudiate their present enormous indebtedness, it would be impossible for them to borrow either at home or abroad except by forced loans from their own people. Mexico could not borrow a cent in the money markets of the world after 1914, when it had ceased paying interest on its national debt. Soviet Russia for a similar reason is in the same predicament.

National Debts and International Trade.

Important factors in national borrowing relate to international trade and finance. Investment in foreign national debts depends to a considerable extent on the international trade relationships a country desires to form. When one nation wishes to obtain an economic foothold in another by increasing its commerce with the latter, its government is likely to favor the investment of funds in the national debt of the other country, just as a manufacturer seeking a market for his products fosters personal relations with certain merchants. The external loans of China and the South American countries have been floated largely in this way. Economic and political considerations induced British bankers to market South American government bonds, and led the German and French governments to encourage investments in the Orient. American banking interests must follow a similar course to expand the nation's foreign trade. It is expected that they will continue advancing funds to foreign governments through bond purchases, and that a broad market for the securities will be estab-

lished in this country. Not only will American investors then get interest on these foreign debts, but American manufacturers and merchants will make valuable business connections abroad.

United States Debt

Only the briefest account of government debts can be given in these pages. A study of the trend of the United States debt from the Revolutionary days discloses that its volume has fluctuated with war and peace. Immediately following each war in which this country has engaged—the War of 1812, the Mexican War, the Civil War, and lastly the World War—the national debt rose sharply. Years were required after each peak was reached to reduce the amount materially. After the Civil War the national debt gradually diminished during a period of thirty years, and amounted to about a billion dollars when the United States declared war with Germany. As a result of the enormous Liberty Loan issues put out during the latest war the debt attained a figure that but a few years ago seemed absolutely impossible. The present total of about $24,000,000,000 amounts to more than all the money spent by the federal government, including war expenditures, from the Declaration of Independence to the end of the nineteenth century.

Until the World War, the United States government bonds held a unique, or rather abnormal, investment position. This was due to the fact that most of the issues could be used as a basis for bank-note circulation. During the dark days of the Civil War the national credit was greatly impaired, and the government could not sell bonds except at a heavy discount. It was chiefly as a means of enlarging the demand for government bonds that the national banking system was created in

1863. The act of Congress creating this system provided that a national bank could issue notes only when they were secured by an equivalent face value of United States government bonds. Later a tax of 10 per cent per annum was placed on notes issued by state-chartered banks to drive them out of circulation. As a result of this legislation United States government bonds were removed from the general investment field. They were bought and held almost entirely by national banks to provide a basis for note issue. Thus the government, figuratively speaking, coined its own debt.

For about a half century, this country had an abnormal currency system by which the supply of circulating medium was adjusted to the size of the national debt. This ridiculous situation, however, helped the market for United States government bonds. In fact, the price of these issues, because of their "circulation privilege," has ruled so high in relation to income yield that none but national banks could afford to buy them. By buying the bonds the banks received interest not only on the bonds but also on the loans and discounts they made through issuing their bank-notes.

British National Debt

The history of the debt of Great Britain is marked by a zigzag upward trend similar to that of the United States. The Napoleonic Wars left the English government burdened with a very heavy debt. It is frequently asserted that this debt was relatively greater compared with the then existing wealth and population than even the present debt. The amount declined steadily for about fifty years after the Napoleonic Wars because the British government followed the policy of redeeming its debt through sinking fund operations and through pur-

chases from surplus revenues. Great Britain has had two wars during the last two decades—the South African War and the recent World War. Both of these conflicts entailed heavy increases in the national debt. The total debt at present amounts to $38,675,000,000 figuring the pound sterling at the normal rate. This is more than $14,000,000,000 in excess of our own government indebtedness.

The British people have long been accustomed to invest in government securities with the result that the national debt has been widely distributed among them. After the Napoleonic Wars when the national debt exceeded $4,000,000,000 the various issues were gradually consolidated into a single issue, now generally known as "consols." The British Treasury then inaugurated the policy of buying up its debt through a sinking fund. This action for a number of years steadily increased the market value of British government securities. The consols have always been active on the British exchanges and freely bought by both institutions and individuals. However, until the outbreak of the World War, when they depreciated greatly in value along with other securities, the income return on them was too low for anyone to buy them but those who wanted above all other things the security of their principal.

French National Debt

The national debt of France has been almost constantly increasing, notwithstanding the fact that between 1871 and 1914 she had no serious wars. The present debt, including the loans put out since 1914, is in the neighborhood of 225,000,000,000 francs, or over $45,000,000,000 at the normal rate of exchange. Since France has a population of a little more than forty millions, this

means a per capita debt of $1,000—probably larger than that of any other European nation. But the French are a thrifty people and the natural resources of their country are developed economically by an excellent industrial organization.

The bulk of the French government bonds are known as "rentes," and are almost exclusively perpetual issues, i.e., they have no maturity date and in some issues not even a redemption provision. This absence of a maturity date and sinking fund is one of the reasons why the French government debt is relatively the largest of almost all the great European countries. This undoubtedly has contributed to the decline which has taken place in the price of the "rentes" since 1914. The French people, however, are a nation of investors, and they place their own government securities as among the most desirable of their commitments.

South American Bonds

A few words may be said about South American government bonds. These securities before the late war had been generally issued in European countries to obtain funds for public improvement purposes. As already pointed out, French and British bankers until the outbreak of the war had eagerly loaned to the South American republics. At the present time, however, Great Britain and France are experiencing a scarcity of capital themselves and the South and Central American countries have turned to the United States for funds to develop their resources. A remarkable field of investment is thus opened to American investors as one of the results of the abnormal international situation, and appeals to the natural desire of American capital to seek larger profits.

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CHAPTER VI

STATE BONDS

Sovereignty of States

The nature of state obligations is not generally understood. In most bond classifications they are usually placed in the same general group with municipal, county, town, village, and school district bonds. A distinction, however, should be drawn between state bonds and the bonds of minor political subdivisions. The former are similar in character to national bonds. This is due to the position of the states in the American scheme of government.

Students of United States history are familiar with the great struggle over the question of states' rights. Early in the history of the Union some of the states claimed that they were sovereign powers and could not, therefore, be sued except with their own consent. When the Constitution was first adopted, however, no provision was inserted defining state sovereignty, and shortly thereafter states were sued by individuals in the federal courts. In 1792, for example, Chism, a citizen of North Carolina, brought suit in the United States Supreme Court against the state of Georgia and was granted a judgment, the court holding that under the federal Constitution a state could be sued by an individual. This decision led to the adoption of the Eleventh Amendment to the Constitution, which definitely determined that a state could not be sued by individuals or private corporations. The amendment reads:

The judicial power of the United States shall not be construed to extend to any suit in law or equity, commenced or prosecuted against one of the United States, by citizens of another state, or by citizens or subjects of any foreign state.

By this amendment a United States court is prohibited from hearing any case in which a private party directly sues a state. An individual who holds a repudiated or defaulted obligation of one of the United States is thus prevented from taking legal action directly against a state in the federal courts for his relief—a very important point to remember in connection with state bonds.

One State Suing Another

States, however, are not completely freed from legal process under the Eleventh Amendment. Any state is still permitted to enter suit against a sister state. The United States government may also sue a state. The federal courts, therefore, can hear and pass judgment in a suit in which one state has a claim against another because of the latter's failure to meet its obligations on a debt. Thus, the state of North Carolina was at one time sued by South Dakota. It had issued certain bonds to aid the construction of a railroad and later refused to pay the principal and interest. South Dakota had received as a gift some of these bonds and it entered suit against North Carolina in the United States Supreme Court to enforce payment of the bonds. The court, on February 1, 1904, entered a judgment against North Carolina. For a time the state ignored the judgment. The United States marshal, however, threatened to auction off property belonging to the state, and the final result was that South Dakota received the full amount of the judgment.

Immediately after this occurred, various states received numerous offerings of repudiated and unpaid bonds of other states for purposes of collection. The United States Supreme Court decision, however, rendered the enforcement of such claims impossible unless the ownership of the bonds by a state was absolute and the suit was brought entirely and exclusively for the benefit of the state. A certain New York attorney on several occasions offered to pass over some North Carolina bonds belonging to clients, to several other states, with the condition that individuals giving the bonds were to receive a certain part of the proceeds in case judgment was obtained. None of the states accepted the bonds because by the Supreme Court ruling no recovery could be made under a conditional gift. Holders of repudiated and defaulted state bonds must, therefore, keep in mind that the security of the bonds is still largely based on the faith and credit of the debtor states.

State Constitutional Provisions

States, however, can give their consent to private parties to sue them for the recovery of a debt. A number have sought to strengthen their credit and make a better market for their own bonds by inserting provisions in their debt contracts which in essence make them suable in case they default in their obligations. The constitutions of many of the states sanction this. The provisions differ widely among the various states and have been changed from time to time to meet the borrowing conditions. A number of the states have gone to the extent of limiting the amount of the state debt. A few constitutions, for example, those of Alabama, Georgia, Indiana, and Ohio, prohibit the state governments from incurring any additional long-term indebtedness except

for defensive purposes. Most constitutions limit the purposes for which indebtedness may be incurred.

The constitutional limitations on state debts apply in some cases to all debts and in others only to debts incurred for so-called non-productive purposes. They are generally very severe in those states that have come to grief because of reckless borrowing in the past. Most state constitutions now prohibit the use of state credit to finance private enterprises, such as railroads, canals, grain elevators, and similar undertakings.

Indirect Means of Enforcing Payment

Although private holders of state obligations are in many cases prohibited from suing directly to recover interest and principal they have frequently indirect means open to them for enforcing payment. There is a clause in the federal Constitution which prohibits a state from passing legislation impairing the obligation of a contract. As the creation of a debt constitutes a contract, no state can legally pass a law nullifying a valid debt. This constitutional inhibition occasionally opens up a means of enforcing the payment of a state indebtedness. The obligations of some states are issued with a provision that certain taxes are to be levied for the payment of the interest and principal of that debt, and as this provision is a part of the contract the holder of the bond may sue to compel a state official to levy the tax, or he can sue the state officer to force him to take legal measures for the payment of the debt.

Limitations on Borrowing and Taxing Power

It has been seen that state credit is based largely on taxing power. The Constitution of the United States places no definite limit on the extent of taxing or borrow-

ing of a state within its respective territory. It can tax its citizens to the utmost. It can also tax the citizens of other states residing or working within its borders. A state, however, cannot take property without due process of law nor can it interfere with the taxing powers of the federal government. As already pointed out the taxing and borrowing power of many states is subject to constitutional limitations. A maximum debt limit or a maximum tax rate is fixed. In some cases, the debt limit is based on the ratio of the debt to the assessed valuation of the property in the state.

Aside from constitutional provisions there are certain practical limitations on the borrowing and taxing powers of the states. A state cannot force loans from its citizens; nor can it very well tax its citizens beyond their incomes. As a charge ahead of its funded obligations, the state must use its revenues to maintain governmental functions, such as police protection, education, administration of justice, and the like, just as a private business enterprise that is in bankruptcy is required to pay its current expenses to maintain itself as a going concern. The creditors of a state, therefore, cannot expect under any circumstances to occupy a better legal position than the creditors of private organizations.

History of State Debts

The history of state debts is very interesting. During the Revolutionary War, the several members of the confederacy incurred debts to pay their army levies. After the adoption of the Constitution, the federal government assumed these debts and the individual states were practically free from indebtedness. Moreover, about a generation thereafter the states received part of the surplus revenues of the federal government which gave an im-

petus to vast schemes of internal improvements. They began to build railways and canals, and make other costly public improvements.

Many of the early railroads were built through state subscription, the state governments either issuing obligations to pay for the railroad stock or guaranteeing the securities issued directly by the railroad companies. In some cases these companies turned out badly and their stocks became worthless. In certain instances states defaulted on their obligation to pay interest on securities issued for the railroad stocks. Even the bonds of the richly endowed state of Pennsylvania were in default for a time. A number of the states that had defaulted resumed interest payments or made settlements with their creditors. Certain southern states, however, particularly Mississippi, Georgia, Florida, and Alabama, refused to recognize the validity of a large part of their indebtedness. Foreign investors who had come into possession of large blocks of these bonds had some very unkind words to say about American honesty. The eminent British essayist, Sidney Smith, made this repudiation the subject of a scathing newspaper article which gained wide circulation.

Nullification of "Carpet Bag" Debts

A second period of state debt repudiation followed in the South after the notorious "carpet bag" rule. Some of the southern states either refused or were unable to honor the heavy indebtedness that had been heaped upon them by the "carpet baggers." Virginia is a case in point. The reconstruction government of the state had issued some bonds the interest coupons of which were made receivable for taxes. Later, when another political party came into power, an attempt was made to nullify

this legislative provision. The Supreme Court of the United States, however, in a series of judgments, known as the "Virginia Coupon Cases," held that the coupons would have to be taken in payment of taxes.

The early difficulties in meeting their obligations gradually led the states to restrict the amount of debt they might incur and the amount of bonds they might issue. Probably the best and wisest expedient was to make provision in the same law that created a debt for the payment of the interest and the principal. Some states, for example, have specific tax revenues set aside for the repayment of their bonds. This has enhanced the value of the bonds as investments.

State debts are now issued mostly with sinking fund or serial payment provisions, to insure prompt payment at maturity. In a number of states the constitution forbids the creation of a state debt unless provision is made for the payment of both interest and principal.

Investment Factors

At this point some of the factors which should be considered in appraising the investment qualities of state bonds may be mentioned. The difficulties experienced by the states in the early history of the country have resulted in the observance by them of sound borrowing principles, so that state bonds are now among the safest investments. In point of soundness they rank next to our own national government bonds. They are now selling at higher prices relative to income yield than Liberty bonds due to their exemption from federal taxes.

Population and Property Valuation

As in the case of national bonds, the two principal factors are the population and the taxable resources of

the state. The Census reports are reliable for population statistics, but great care should be taken in accepting tax assessors' figures on property valuations. Tax assessors as a rule do not make close appraisals of property value. Moreover, some states have assessments at 100 per cent of the real value, while others assess at as low as 10 per cent or 15 per cent. Thus, a western city is assessed at but 10 per cent of real value, while New York City is practically assessed at 100 per cent. It is on such unreliable estimates that the taxable resources of a state are generally calculated.

Profit-Earning Enterprises

In studying state indebtedness due consideration should also be given to the productive and profit-earning enterprises of the state. Some states have built canals, docks, and water works for purposes of profit as well as for the benefit and convenience of its citizens. The Port of Louisiana bonds recently issued by Louisiana are covered by a profit-making enterprise, the ports and docks at New Orleans. Similarly, bonds have been issued by California for harbor development. An early example of a public income-producing enterprise was the Erie Canal of New York State. The tolls which were at first charged for its use were sufficient in time to extinguish the debt created for its construction.

Expenditures for Internal Improvements

The amount of a state's debt in relation to its expenditures for internal improvements is a very important point to consider. It is well to know that published figures are often very misleading in such matters and the investor must be on his guard. Besides productive improvements, consideration should be given to the actual

net debt of the state; i.e., the total debt less sinking fund assets, when such sinking funds are to be applied directly to the payment of the debt. Some states make a practice of deducting the sinking funds from the outstanding debts.

Natural Resources

More important from an investor's standpoint than even the purpose for which bonds are put out are the natural resources of the issuing states. Some western states have profit-bearing resources. Minnesota, for example, has its iron ore beds and South Carolina its beds of phosphate deposits. The revenue received from such sources as an offset to the interest payments on the gross debt, also can be used to extinguish the principal.

Exemption from Federal Taxes

State bonds have other features which affect their value. Among these is their exemption from federal taxes, which is exceedingly important at the present time. It has been held by the Supreme Court that the federal government has no power to tax the income derived from ownership of state indebtedness or the indebtedness of any subdivision of a state. The power to tax is the power to destroy, and the federal government under the Constitution cannot interfere with the revenues of the states, or the states with the revenues of the federal government. Hence, state bonds are exempt from federal taxation, and United States bonds are free from all state or municipal taxation.

Marketability

A feature enhancing the marketability of state bonds are the laws of the various states, of which New York

is one, permitting savings banks and trustees to invest in state bonds. This privilege has been generally extended to include bonds of all the states, not excepting states which are under the cloud of "repudiation." The bonds of certain southern states which were held to be "in default" were illegal as investments for savings banks in New York until a recent year, when a change in the law limited such defaults to issues authorized since 1878.

Several states, in order to improve the market for their own obligations, compel insurance companies and banks to maintain a reserve consisting of their respective bonds. For example, if an insurance company wants to do business in North Carolina, it must deposit with a state official a reserve consisting of the state's bonds. A market is thus accordingly created for the securities. State bonds are also held by the national banks, particularly when these institutions wish to have collateral to place behind deposits of state funds. They are also generally acceptable as security for postal savings deposits. All these privileges attaching to state bonds give them an attractive market. The securities at the present time are purchased by most careful and cautious investors.

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CHAPTER VII

COUNTY AND MUNICIPAL BONDS

Subdivisions of a State

In the preceding chapter the principal distinguishing feature of state bonds was pointed out, namely, that a private holder cannot sue a state to recover the interest or principal unless the state specifically grants him the right. In the case of bonds of counties, municipalities, and other state subdivisions, which are generally referred to simply as "municipal" bonds, the situation is different. These are obligations of corporations that can be sued.[1] Political subdivisions of a state exist as privileged civil organizations with all their rights and powers delegated to them by the state. Some are formally incorporated, while others are not. The courts have generally held that bonds issued under the authority of the state by an unincorporated body politic are the state's own obligations. Several years ago the Commission of the Port of New Orleans, which is an unincorporated political district organized for purposes of dock improvement, issued bonds by permission of the state of Louisiana. The question arose subsequently whether the bonds could be considered direct obligations of the state. It was held on good legal authority that they were state obligations, because the Port of New Orleans, though organized under the state constitution, was not a corporate body politic.

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[1] In this connection it is well to point out that in England municipal bonds are classed as corporation bonds.

Taxing and Borrowing Powers

Two of the powers that are delegated by a state to a political subdivision are: the taxing power, and the borrowing power. In connection with the borrowing power the courts have generally held that it must be delegated directly by the state and cannot be implied from a grant of other powers. It is otherwise in the case of the taxing power. Every political subdivision has a right to tax, and frequently a section of an incorporated subdivision is granted the right. These two powers of borrowing and taxation are the principal factors to be considered in connection with the security of municipal bonds.

States have found it wise from experience to limit by constitutional or statutory provision both the taxing and the borrowing power of municipalities and other bodies politic. The state Constitution of New York, for example, restricts county and municipal borrowing to an amount not in excess of 10 per cent of the assessed valuation. This limitation, however, does not apply to indebtedness incurred on account of income-producing improvements, such as water-works, docks, subways, etc., or to loan scrip issued in anticipation of tax receipts. If such provisions are merely on the statute books and not in the state constitution, they should be closely watched by investors and students of bond values, since they are very easily changed.

The case of Arkansas is interesting in this respect. The constitution has a provision prohibiting municipalities from issuing any securities whatever. The cities and towns, however, evade the prohibition by organizing debt districts which are by statute permitted to borrow. Other states have also authorized special tax and debt-creating districts. For instance, along the Mississippi

River and its tributaries there are a number of levee and drainage districts, each comprising several municipalities and having both taxing and borrowing powers.

Legal Provisions Relating to Issues

In view of the fact that municipalities can be sued and their debt contracts are enforceable in the courts, it is very necessary to know the legal provisions under which municipal and other civil loans are issued if investments in the securities are to be safe. To be valid obligations the loans must be issued in accordance with these provisions, which may be contained in state constitutions, general statutes, or in municipal and local ordinances applying directly to the loan. Certain attorneys specialize in furnishing legal opinions on the legality of municipal bond issues, and no issue should be placed on the market without procuring a reliable opinion as to its validity. The attorneys carefully study and interpret the data upon which they base their opinions. An example of such an opinion follows:

Caldwell and Masslich
115 Broadway New York City
New York, June 2, 1919

Dear Sirs:

We have examined certified copies of the legal proceedings and other proofs submitted to us relative to the issuance and sale of

$40,000
City of Buffalo, N. Y.
Bridge Construction Bonds
Dated June 2, 1919

Maturing $2,000 on June 2 of each of years 1920 to 1939 inclusive.

Principal and semi-annual interest (June 2 and December 2) at 4½% per annum, payable at the office of the

Commissioner of Finance and Accounts of the City of Buffalo or at the Hanover National Bank of the City of New York, at the holder's option.

We have also examined one of said bonds as executed (Bond No. D-2412).

We are of the opinion that such proceedings and proofs show lawful authority for the issuance and sale of said bonds pursuant to Chapter 217 of the Laws of 1914 of the State of New York, and acts amendatory thereof, being the Charter of the City of Buffalo, and other provisions of law applicable thereto, and that said bonds are binding and valid obligations of said city.

Respectfully yours,

(*Signed*) CALDWELL AND MASSLICH.

CITY AND COUNTY OF NEW YORK
ss.:
STATE OF NEW YORK

I hereby certify that I have compared the foregoing with the original opinion of Caldwell and Masslich dated June 2, 1919, and that said copy is true and complete copy of the whole and every part of the said original opinion.

(*Signed*) FREDERICK C. MOLLER.
(*Notary Public*).

Bonds Issued Below Par

As an illustration of how investors in municipal bonds may experience trouble because of the failure of the city to comply with the legal requirements connected with their issue and sale, a recent instance in the state of Washington may be taken. The city of Centralia issued some bonds that were sold at a discount to the highest bidder, i.e., below 100 per cent of their face value. It happened that the state had, as it still has, a law requiring municipalities to sell their bonds at par or better. Five years after their issue, the Accounting Commission of the state discovered that the bonds had been sold at a discount, and the city officials were sum-

moned to court for the purpose of invalidating the issue. The court, however, held that inasmuch as the bonds were already in the hands of innocent holders they were valid, but the city of Centralia could and should obtain the amount of the discount from the bondholders who presented them for payment at maturity. In other words, the city was to recover the loss by deducting from the principal the amount of the discount. In other similar cases courts at times have held that the bonds were not valid obligations and need not be paid.

"Caveat Emptor"

In commercial transactions the legal principle known as *caveat emptor* prevails as a rule, which translated literally means "let the purchaser beware." These words signify that the buyer can have no redress for errors committed in good faith and without any attempt to defraud. Accordingly, the bond purchaser should bc assured by competent and reliable authority that the legal provisions relating to an issue of municipal and other civil bonds have been fully complied with. In applying the principle of *caveat emptor* to municipal bonds the courts have been quite lenient to bondholders, holding in many decisions that when the bonds passed to the hands of innocent holders, even though the legal provisions were not strictly complied with, they became valid obligations of the municipality. Moreover, municipalities in order to maintain their credit sometimes have validated outstanding issues which have been judicially declared as not having been issued in compliance with the law.

To assist investors in making safe investments in municipal bonds, trust companies and other financial organizations have taken on the function of registering and certifying the authenticity of the bonds. The U.

S. Mortgage and Trust Company of New York makes a specialty of this service. The certification, however, is not conclusive. It merely signifies that certain legal provisions have been complied with in connection with the bond issue. In order to avoid forgeries of bonds, municipalities, like private corporations, generally have trust companies or other agencies register the bonds and act as transfer agents.

Political Character of Debtor

The chief classification of municipal loans is that based on the political character of the debtor. First in the list are the county bonds, because the county is the largest subdivision of the state. Next are the city and town bonds. Village and school district bonds and those of any other geographical area having legal authority to incur indebtedness follow in order. As already pointed out, geographical districts are frequently incorporated for a special purpose and given the borrowing and taxing powers. The best known of these special tax organizations are levee and drainage districts. The Miami Conservancy District in Ohio, for example, has been incorporated for the purpose of enabling the people within the drainage area of the Miami River to issue bonds and protect themselves against floods and washouts.

Another well-known example of a specially organized political subdivision is the Chicago Sanitary District. The district was incorporated to enable a section of the state to construct and finance drainage canals and other works for the protection of the public health. It has issued bonds which have been on the market for some time. In connection with such securities it is well to bear in mind that the borrowing power must be accompanied by the taxing power. Otherwise the district

would lack the means of obtaining revenues to meet the charges on its debt. No incorporated political district can assign its rights to tax or borrow to another organization, since it is a firm legal principle that a delegated power cannot be redelegated.

Purpose of Issue

Municipal bonds may also be classified according to the purpose of their issue, precisely as business corporation bonds are, which it has been seen are grouped into improvement bonds, refunding bonds, and other classes connoting the object of their issuance. Municipalities as a rule issue bonds for definite purposes which are generally authorized by statute and stated on the face of the bond. According to this classification bonds are divided into two principal groups: those issued for revenue-producing improvements, and those put out for non-revenue-producing, or unproductive, improvements. An example of municipal bonds issued for productive purposes are the New York City Rapid Transit issues which were put out for the purpose of building subways and other rapid transit facilities. Other examples are the bonds of a number of port cities put out for the purpose of purchasing and improving docks, harbors, and transportation facilities, from which regular rentals are obtained. Direct income, however, is not necessarily to be regarded as the sole criterion of productive improvements, since improvements are productive if they cause an increase in the value of municipal property. The most common examples of profitable municipal utilities for which bonds are issued are public water-works. The revenue from the water rentals is expected to cover the interest and amortization charges on the bonds. Street and paving bonds may likewise be considered as issued

for productive purposes, though roads do not as a rule bring the municipality revenue directly.

Not infrequently it happens that enterprises which are undertaken for productive ends fail of their purpose completely, neither yielding a profit nor otherwise benefitting the people. Take, for example, the Erie Barge Canal in New York State, on which over $150,000,000 has been spent. It is completed and ready for use but little more than a few scows ply on it. It has thus far been simply a heavy financial burden to the state.

In the unproductive class are generally included "school," "hospital," "park," and "sewerage" bonds, as their proceeds are expended for purposes which, though essential or beneficial to the municipality, do not add, except very remotely, to its revenue-producing power. Indebtedness incurred for such purposes, however, is essentially economic. On the other hand, some cities are said to have incurred debt to furnish music and other transitory recreations for the people. Bonds issued for such purposes are not generally desirable investments.

Payment of Principal

Municipal bonds may be classified according to the method and provisions made for the payment of the principal. Most of the issues put out in the last decade have some provision for their payment at or before maturity. If cities were not compelled to take such precautions, their indebtedness would rise at a rate that would soon lead to their bankruptcy. Even as matters stand, many municipals are unable to meet maturing obligations by any other means than by refunding.

Municipalities usually have a choice of two ways of meeting bond maturities without a reissue. One is the

sinking fund method, and the other is by serial repayments. An example of the latter method is that adopted by the city of Cleveland for the repayment of its $5,000,000 issue of School District 6 per cent Bonds, dated January 1, 1921. Under this plan, bonds amounting to $250,000 are to mature every year beginning January 1, 1922, until January 1, 1941. There is a good deal of controversy as to whether it is less costly for a municipality to issue sinking fund bonds or serial bonds, but it has no great practical significance. The factor determining the issuance of the one type or the other is the investors' preference. If at the time of issue most investors desire short-term bonds, serial bonds are issued; if they favor long-term bonds, sinking fund bonds should be put out.

The leading objection to the sinking fund bonds is that the fund may be badly invested and otherwise mismanaged. With serial issues, the necessity of investing a fund is dispensed with, since the payment of principal is accomplished in the same way as the payment of interest. The difficulty with an offering of many maturities is that each maturity is not equally in demand. Certain maturities are bought and the rest become a drug on the market. As pointed out before, it is largely a question of making the bonds such as will satisfy the prevailing public demand.

Investment Factors—Taxing Power

Municipal bonds should possess the same safety of income and principal as other investment securities. Naturally those bonds will sell best which have the greatest degree of security as to both principal and interest. A factor in the safety of income, as already pointed out, is the taxing power of the municipality.

If that power is severely restricted by law the municipality may be unable to raise sufficient revenue to meet its interest charges. The bonds of a city which has nearly reached the limit of its taxing resources are, of course, not as well secured as the bonds of a city without restriction as to tax rates. Municipalities, however, can generally evade legal restrictions on local tax rates by increasing the assessed value of taxable property. In general, cities may augment their revenue by raising either their tax rate or the assessed valuation. In New York State some municipalities assess only at 25 per cent of the market value, and have a high tax rate, while others assess at 100 per cent or more of market value and have a low tax rate.

Restriction on Borrowing Power

A limitation placed by state law on municipal debt creation is generally assumed to be a protection to bondholders. Circulars advertising municipal bonds frequently contain a statement of the limit placed upon the city's powers to contract debts. The limit is usually proportioned to the assessment of taxable property. If it is too low it may hamper the city in obtaining needed capital for improvements.

Outstanding Debt

A foremost consideration in an analysis of the investment merits of municipal bonds is the amount of the outstanding debt of the issuing city as compared with its revenues and taxable resources. The amount of the debt should be properly related to the population and wealth of the municipality, because the charges on the debt are met from the resources of its citizens and property-holders. In calculations of municipal indebted-

ness, the net debt item, or the part of the debt not offset by sinking funds, should be taken. Moreover, the portions of the debt contracted for productive and non-productive purposes should be separated. This distinction is frequently made in munipical debt statements. There should also be an authoritative examination to determine whether the debt figures are correct. Finally, the extent of the overvaluation or undervaluation of property in the "assessed value" figures should be investigated.

Purpose of Issue and Term of Bonds

A prime investment factor in any issue of municipal bonds is the purpose for which the debt is contracted. An investor should carefully determine whether the improvements on property acquired through a bond issue has a period of usefulness beyond the maturity of the bonds. Thus municipalities may issue bonds payable in thirty years or more to cover the cost of street paving which is likely to wear out in ten years. At the maturity of the bonds the paving may have been renewed two or three times, and each time additional bonds may have been issued to cover the cost. The result is an accumulation of debt not represented by existing values. The generation that enjoys the full use of a public facility should pay for it and the cost should not fall on the next generation. Bonds running for a period of fifty years or more are issued for the construction of schools which will wear out or become inadequate in twenty-five years or less. Municipal bonds should therefore be paid off before the property purchased with their proceeds loses its value. The New York state constitution contains a clause which compels municipalities to observe this sound principle of debt contraction.

In a few instances cities have failed to meet their obligations either as to interest payments or as to repayment of the principal, and an adjustment was necessary as in the case of an individual who has failed. A clear case of city property being sold under foreclosure is almost unknown, but there is no reason why such sale cannot take place under the law.

Market for Bonds

Municipal bonds are, for several special reasons, eagerly sought for by investors. They are, in the first place, exempt from federal taxation and also generally from the taxes of the state in which the debtor is located. They do not, however, enjoy the same exemption in other states.

The bonds have a preferred market also because of the laws permitting savings institutions and trustees to invest their funds in them. The New York law allows savings and trust funds to be invested in the debt of a political subdivision of the state, provided the total debt of the subdivision does not exceed 10 per cent of its assessed valuation. The bonds of municipalities outside the state are also made "legal" for savings banks when the finances of such cities comply with the requirements laid down by the New York State Banking Department. Massachusetts has a similar law.

Municipal Statistics

A few words may be said regarding the statistics which are issued in connection with the marketing of municipal bonds. It is the common practice of municipalities to publish figures relating to assessed valuations, the amount of outstanding indebtedness, revenues, tax receipts, expenditures, and the like. The investor

should carefully analyze these figures before making a commitment. Frequent reference has been made to the unreliable character of figures relating to assessed valuations. The figures on actual indebtedness are also often misleading. For example, bonds that have been issued for revenue purposes may be excluded from the figures of indebtedness on the ground that they pay for themselves. It is very difficult in some cases to determine whether some bonds are based on revenue-producing improvements or not. It should be borne in mind that only when the improvements yield a sufficient income to meet the principal and interest of the obligations can they properly be considered revenue-producing. Under the laws of several of the states, municipal bonds of this character are not included in the legal limit placed on municipal borrowing. Thus the bonds of New York City issued for rapid transit purposes originally did not come within the ten per cent limitation placed on the city's borrowing power, but the subway construction has lately furnished insufficient revenue, so that bonds issued for this purpose are included with others comprised within the legal borrowing capacity. In studying statistics of municipal indebtedness the sinking fund assets held for payment of debt should be taken into consideration, and the net debt should always be distinguished from the gross debt.

An investor should carefully analyze each item in a city's debt and clearly understand its nature. There are frequently items representing temporary borrowing on so-called "tax-anticipation" certificates, which are presumably to be paid off when the current tax levies are received. Such items are not covered by municipal expenditure resulting in the direct acquisition or possession of tangible property or improvements, and they have,

therefore, been contracted for revenue and not for capital purposes. (See Chapter II, pages 18-19.) The distinction between these two objects of debt contraction should be clearly made in each municipal debt statement.

Municipal indebtedness should be further analyzed in respect to the relationship of the obligation to the community as a whole. It has become a practice, for example, for some communities to issue bonds, known as "special assessment" bonds, which are usually secured by unpaid special assessments against property that is benefiting directly from improvements made with the aid of the debt incurred. These special assessment bonds should be separated from, and their amount compared with, the other bonds which represent indebtedness secured by all the taxable property in the municipality.

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CHAPTER VIII

RAILROAD BONDS

Development of Funded Debts

The subject of railroad bonds covers a large field, since, with the sole exception of the government issues, they are the most important class of investment securities marketed in the United States. As the principles of railroad bond investment do not differ materially from the general investment principles pointed out in the previous pages, only the distinctive features of railroad bonds with which investors and students of finance must become familiar will be pointed out here.

A feature connected with railroad bonded indebtedness in this country is the early use of the mortgage lien. In Great Britain, where railroad building was slightly in advance of that in the United States, railroads were financed by issues of capital stock, or of ordinary certificates of indebtedness, which gave creditors no lien or preferential claim. Americans, however, seemed to have demanded some lien or assurance against loss in case their railroad investments would not be repaid when due. Accordingly, in the early period of American railroad construction, mortgages and other pledges became a predominant characteristic of railroad indebtedness. As the railroads grew in size and importance and as their capitalization increased, these railroad mortgages became more complex and intricate. Furthermore, the kinds and classes of railroad securities multiplied.

The history of the Erie Railroad mortgages offers

a good illustration of this. The Erie was one of the first large railroad organizations in the United States. It was originally planned by the state of New York, but was taken over, constructed, and operated by private initiative and enterprise. The first Erie mortgage was a document of but three printed sheets, which stated merely that the railroad hypothecated its properties to the bondholder. The most recent of the Erie mortgages covers more than one hundred and fifty pages and contains abstruse provisions that only the statisticians, lawyers, and experts of banking institutions can interpret.

Before taking up the special characteristics of railroad mortgages, a brief discussion of the kinds of railroad bonds will be helpful. This has already been done in a general way in Chapters III and IV. It is very important from the viewpoint of the bond investor to know the real character of his security, which is not always designated properly by its name. A railroad company may issue a security and call it a "first and refunding" mortgage, when it is very little "refunding" and much less "first." No dependence can be placed upon the name of the bonds in obtaining an idea of the character of their security or the nature of the obligation they represent.

Debentures

The plain railroad bond without the mortgage feature, as already stated, is rather the exception than the rule in this country. Very few of these issues are found in the American railroad list. Several of the New England railroads in the early days followed the policy of borrowing by sale of debentures, and a number of these issues are still outstanding. They are certificates acknowledging the indebtedness of the borrower to the

holder and agreeing to pay a certain sum as interest at specific intervals. In some cases, where there is a stipulation to that effect, a railroad debenture may subsequently become a mortgage bond when the railroad property is mortgaged as security for a new bond issue. The purpose is to give the old outstanding debenture the same security as the obligations issued under the newly created mortgage. In this way a debenture may acquire the security of a mortgage without having anything on its face to indicate the fact. The New York Central and the Chesapeake and Ohio railroads have debenture bonds outstanding which, because of subsequent mortgaging of their properties, are now secured by mortgage liens.

Mortgage Bonds

Mortgage bonds, as already pointed out, are called such because they have a specific lien on physical property, which entitles the bondholders to take possession of or to sell the property under legal procedure in case the debtor company fails to fulfil the provisions of the mortgage contract. The lien may be a so-called "general mortgage," covering all the property owned and subsequently acquired by the debtor, or it may be limited to certain portions or divisions of the property. If the lien embraces not only the property that is owned when the mortgage contract is made, but also any property that may be later acquired, the clause in the contract which specifies this is known as the "after-acquired property" clause. Frequently railroad companies have been enabled to evade the after-acquired property clause. When prevented from issuing additional bonds under the mortgage with the clause, or from pledging additional property under another mortgage, they have organized separate subsidiary corporations in whose name as debtor

or mortgagor the mortgage agreement has been made. This practice has resulted in the creation of an excessive number of railroad mortgages covering a single railroad system. The so-called "divisional" mortgages, which are liens upon branches or sections of a railroad system, are to some extent the result of the evasion of the after-acquired property clause.

Collateral Trust Bonds

Moreover, the collateral trust bonds of railroads, by which a parent company borrows on the mortgage securities of its subsidiaries, is frequently the effect of the after-acquired property clause. The railroad collateral trust bonds (see page 43), as already pointed out, are as much a lien as the mortgage bond and are also issued under a deed of trust, the only important difference being that the mortgage bond is a mortgage on realty or fixed physical property and the collateral trust bond is a mortgage on personalty represented by securities.

The personalty serving as the collateral securing collateral trust bonds is known in legal language as "things in action," i.e., claims. The pledge may consist of stocks or bonds, or both. It may be the bonds of the debtor company which issues the securities. For example, the Pennsylvania Railroad issued in April, 1920, ten-year collateral trust bonds secured by some of its general mortgage bonds. A short time previous the Baltimore and Ohio and the New York Central railroads issued collateral trust bonds, each secured in part by stock of the Reading Company. In this latter case the securities pledged were those of another corporation.

Additional examples of collateral trust bonds secured by the capital stock of other railroads are the Atlantic Coast Line "Louisville and Nashville" Collateral Trust

4 per cent Bonds, and the Great Northern–Northern Pacific, "Chicago, Burlington and Quincy" Joint 4 per cent Bonds. A number of railroad companies have issued bonds secured by the pledge of the capital stock of their coal companies or other separately incorporated properties which they own.

Equipment Trust Certificates

Another important class of securities issued by railroads is known as "equipment trust certificates." These carry a lien on personalty consisting of physical property, such as locomotives and cars, i.e., rolling stock of the railroads. In mortgaging personalty certain legal provisions must be observed which generally do not apply to a mortgage on realty. The pledged property is placed in the possession and care of a trustee, as, for instance, in the case of collateral trust bonds. Equipment trust certificates, however, are peculiar in this respect in that the mortgaged personalty is left to the use of the debtor corporation. In the early days the mortgaged personalty was generally deposited as a pledge with the mortgagee, in the same way as a watch is pledged with a pawnbroker. This is not the case of the equipment mortgaged to secure the equipment trust certificates. It is left in the possession of the debtor corporation by which it is used.

Issued under Two Plans

There are two plans under which equipment trust certificates are issued. One is known as the "Philadelphia plan," under which the ownership and full legal title to the equipment is in the name of a corporation or an association which acts as trustee for the certificate-holders and which issues the certificates. The indebtedness is, therefore, not directly that of the railroad com-

pany. The company, however, usually guarantees the principal and interest and gets a lease of the equipment for the term of the indebtedness, paying a rental sufficient to meet interest and the principal at maturity of the equipment trust certificates. Thus, as long as the certificates are outstanding the equipment is leased by the trustee to the railroad company and the net rental that the company pays is in lieu of the interest and the instalment payments on the principal. Under the terms of the lease, when the interest and the instalments of the principal have been paid the equipment becomes the property of the railroad company.

The other plan of issuing equipment trust certificates is to give the railroad title to the equipment under a conditional sale agreement, in the same way as it is given title to mortgaged realty. Instead of the locomotives and cars being leased to the company, as under the Philadelphia plan, the railroad acknowledges that the equipment is mortgaged for the indebtedness and that it will pay the interest and principal to holders of the certificates. If interest and instalments of the principal are not paid the trustee can claim possession of the mortgaged property under foreclosure.

Equipment trust securities are popular with investors. They are regarded as the highest grade of securities, and in one or two cases where there has been a default the equipment has been sold by the trustee for a greater amount than the outstanding indebtedness. The contract made in connection with the issue of equipment trust certificates generally contains provisions requiring the railroad to keep the equipment in good repair. Moreover the period of time during which the equipment trust certificates mature does not extend beyond the average period of profitable usefulness of such equipment. It

is also generally required for the protection of the certificate-holders that the equipment be kept fully insured against fire, accidents, etc.

Indenture or Deed of Trust

The indenture is a most important document to the holders of railroad bonds because it definitely sets forth their rights and privileges.

As already pointed out the deed of trust is a written contract executed by the railroad company as mortgagor to a trustee or trustees, as mortgagees. The bondholders, individually, are not made parties to the contract, as the trustee acts in their behalf. In every railroad deed of trust it is essential that the mortgaged property be fully described so that it can be readily identified and segregated from the company's other property. This is a feature required in all mortgage loan contracts. The indenture should also contain the name and a description of the bonds to be issued under the mortgage, their maturity dates, the interest rate or rates, and such other provisions as will in the future avoid uncertainties or legal perplexities. In addition, the mortgage indenture should describe the provisions for enforcing the lien in case the interest or the principal is not paid, or some other part of the contract is not carried out.

Controlling Voice

An important provision in railroad deeds of trust is the one specifying the proportion of the outstanding bonds that must be held to obtain the controlling voice when steps are taken to enforce the lien or to alter the provisions of the mortgage. For example, the indenture of the Seaboard Air Line Refunding Mortgage states that the holders of a majority of the bonds shall de-

termine the procedure to be taken. If this majority, by written notice to the trustee, decides that the period of the bonds shall be extended or that the interest payments shall be waived, the minority holders generally must abide by the decision. This provision is responsible for the so-called "protective committees" which are organized with the object of getting deposits of bonds so that enough is obtained to constitute a controlling power for bringing about definite and unified action for the protection of all the holders.

Rights and Duties of Trustee

In this connection it is well to point out again that though the bondholder is individually a creditor of the corporation, he is limited in his rights as a creditor both by the provisions of the mortgage indenture and by the fact that there are other holders who have the same rights and with whom he should co-operate. In other words, he has to exercise his rights through a trustee, usually a trust company which represents all the holders. The trustee, as a rule, will not act unless it is assured of the bondholders' support. A certain proportion of the bondholders is theoretically required to give written notice to the trustee demanding that action be taken. The trustee will not act unless funds are available to cover expenses. Generally the protective committee mentioned above provides the funds, charging the expense pro rata to the bondholders.

The trustee under the terms of the mortgage limits its liabilities; that is, it agrees to act as such only as provided in the mortgage indenture and to assume responsibility only so far as it is legally required. All these matters make it very important for one who wishes to study an issue of bonds to become thoroughly familiar

with the mortgage. In general it may be said that the deed of trust or mortgage outlines clearly the rights of the bondholders, the rights and duties of the debtor corporation, and the rights and duties of the trustee.

Investment Factors

In studying these factors there should be considered, first, the railroad as a money-making enterprise, and, second, the investment position of the specific bond issue under investigation. If a particular bond issue is studied, the investor should naturally look into such matters as the rights, claims, and privileges of the holders of the issue as set forth in the mortgage indenture. He should inquire into the location and extent of the mortgaged property, whether it is the main line or a branch line, and whether the mortgage is a first or an inferior lien. He should also ascertain the authorized or maximum amount of the bonds that can be issued under the mortgage, the amount of the bonds already issued and outstanding, and the relations of such amounts to the value and earning capacity of the property. The conditions under which the unissued portion of the authorized maximum amount may be issued and sold should also be known. Such conditions are invariably found in the mortgage indentures.

Thus, assume that a mortgage covers a railroad line a thousand miles long. The amount of the bonds already issued and outstanding under the mortgage is $10,000,000, out of a total authorized issue of $25,000,000. The unissued portion can be put out only to acquire new railroad property or to make extensions or improvements on existing lines, and the rate at which additional bonds may be issued shall not be in excess of 75 per cent of the cost of such new extensions or improvements. To

determine whether this property is highly mortgaged, it is usual to divide the $10,000,000 by the one thousand miles and the resulting amount would be the rate per mile of bonds outstanding. If it is a case of a mortgaged main line of an important railway doing a large business and earning a substantial net income, a first issue amounting to $10,000, or even as much as $50,000 per mile, would not be considered excessive. But if the mortgage covers only a branch line and the indebtedness per mile on that section is $25,000, the amount would in all likelihood be excessive and in case of default of the bond issue the property would be given over to the bondholders who would not be able to operate it profitably or to dispose of it without a loss. Hence the security of principal would be impaired.

Statistical Data

These matters are examined carefully by the statistical departments of banks and bondhouses. Important data relating to relative bond values are generally contained in the investment manuals and bond books noted at the end of the volume in the bibliography. Bond salesmen, investors, and bankers should know if the railroad is lightly or heavily mortgaged, whether its funded debt is increasing or decreasing, and whether the net earnings are growing or declining. Information in regard to the amount of mortgage in relation to the mileage is of very little value unless it also gives the character and quality of the railroad, its physical structure, and the earning power of the part of the property that is mortgaged.

A double-track railroad is usually more valuable than a single-track, and a three-or four-track road is usually worth more than a double-track. Prospective investors

should also know the various physical assets covered by the mortgage, such as rolling stock, terminals, bridges, etc. Some of the mortgages cover valuable terminal property, as for example, the Grand Central Terminal and the Pennsylvania Terminal in New York City. The character of the bridges, the quality of the rails, i.e., whether light or heavy, the kind of ballast and the quality of the ties and other facts about the physical condition of the railroad should be explained to investors by expert bond analysts. The ordinary laymen cannot go into all these details, but the bond salesman should at least know something of the geographical location of the line and the character of its construction, as well as its capitalization and earnings. As a rule the cost of construction will be less on a line built through the prairie than on a line built through a country cut by mountains and rivers.

Studying the Railroad as a Whole

In addition to having special information about the nature of the mortgaged property, the holder of railroad bonds should usually know the character of the railroad as a whole, the geographical section which it traverses, and the relationship of the main line to its branches and to connecting railroads or other transportation facilities, as the so-called "feeders" of the main stem in many cases prove to be "suckers" which absorb profits rather than add to them.

A knowledge of the volume and nature of the traffic of a railroad is also quite essential in understanding the investment qualities of its bonds. If it has a high-grade traffic, i.e., carries articles on which a high freight rate is charged, its profits are apt to be relatively larger than if its traffic is low grade and consists of such

articles as coal and ore on which a low freight rate is charged. However, the fact that one railroad has a greater proportion of high-grade traffic than another does not indicate that its bonds are a better investment. If the quantity of low-grade traffic is very large it may be a very profitable business if handled cheaply.

Financial Statements

The financial statements of a railroad must necessarily be analyzed to learn how its earning capacity compares with its capitalization and its outstanding bonds. These statements are given in all the regular investment manuals. They are also found in the annual reports of the companies made to stockholders and the Interstate Commerce Commission. In studying the income statement the investor naturally interprets the results with reference to the particular bond issue in which he is interested. If he has a first mortgage bond he looks to see if the net income furnishes sufficient margin over the charges on the issue. For example, if the bond issue requires $1,000,000 a year for interest and the company has available for this purpose net earnings amounting to $3,000,000, the issue is said to be protected by net earnings equal to three times the interest charges. If the bonds are covered by a second mortgage, the amount of interest charge on the first or prior lien issues should first be deducted, before an estimate is made of the safety of income on the second mortgage bonds.

Operating Efficiency

Another factor to be considered in studying railroads from an investment viewpoint is the character of the management. The important question with regard to management is whether the road is operated efficiently

and economically. In arriving at an answer certain traffic statistics and other data are required as a basis for forming a judgment. Among the important units in measuring operating efficiency are the average train-load, the train-mile, the locomotive-mile, the car-mile, and others. It is a well-known fact that a company which is increasing the average train-load on its lines is, as a general rule, reducing expenses. Similarly, a company that is reducing the mileage run by its trains without reducing the amount of traffic is conducting its business more economically, since each additional mile that a locomotive is run means an additional expense in wages, coal, wear and tear, and other items. The uniformity with which statistics of ton-miles, train-miles, locomotive-miles, train-loads, car-loads, etc., are compiled permits a ready comparison with other railroads operating in the same section of the country, or operating under substantially similar conditions. If one railroad should have an average train-load of 500 tons and the other 750 tons, it is natural to assume that the first company operates less economically than the other.

Directors

The business character of the directors is important in estimating the investment merits of a railroad. Some men are considered particularly high grade. In fact much railroad success is due to the influence and activity of a few directors who because of their understanding of railroad problems can judge how to manage the property efficiently and economically. On the other hand, there are many directors of railroads who are unable or unwilling to give proper attention to the affairs of their company and investors in railroad securities have suffered at times on their account. It is essential for a

railroad to have strong financial backing to assure its future. It is a well-known fact that certain large banking houses constantly stand behind a railroad and are ever ready to buy its securities and market them.

Political Attitude

Lastly, something should be said about the political attitude toward railroads. Ordinarily this attitude is not considered as seriously affecting security values. However, experience has proved that it is a very important factor. Any railroad company that is continuously the object of public animosity or must constantly face political opposition, in the course of time suffers financially. The difficulties of the New York, New Haven and Hartford Railroad have been due in part to the political animosity that grew up against the company in the New England states. In the case of public utility companies in general this political attitude is of very great importance to investors.

The Transportation Act of 1920

The attitude of the federal government toward the railroads is outlined in the Transportation Act of 1920. The importance of this piece of legislation to investors in railroad securities can hardly be exaggerated. The features of the act of peculiar interest to them are the following:

The Interstate Commerce Commission is directed to prepare and adopt a plan for the consolidation of railroad properties into a limited number of competing systems and to authorize consolidation when in harmony with its plan.

The Commission whenever in its opinion an emergency exists may require such joint or common use of

terminals, including main-line tracks running for a reasonable distance outside of such terminals, as will best meet the emergency and serve the public interest.

A revolving fund amounting to $300,000,000 is created. Carriers may within two years after the passage of this act, after a hearing before the Commission, secure loans at 6 per cent from this fund, for not exceeding five years, to enable them to serve properly the public during the present period of transition from government to private operation.

Net railway operating income in excess of 6 per cent of the value of the property is to be utilized as follows: one-half of such excess shall be placed in a reserve fund maintained by the railroad; the remaining one-half shall go into a general railroad contingent fund.

A railroad may draw from its reserve fund, for the purpose of paying dividends on its stock, interest on its bonds and other securities, or rent on leased roads, to the extent that its net railway operating income in any year is less than 6 per cent of the actual value of the railroad's property; and after the reserve fund has been accumulated to the extent of 5 per cent of the value of its property, the excess may be used for any lawful purpose.

Loans bearing interest at 6 per cent per annum are to be made to railroads from the general railroad contingent fund when approved by the Commission, which is also to prescribe the terms and the security of such loans.

Railroad Earnings

In the exercise of its power under the act to prescribe just and reasonable rates, the Interstate Commerce Commission can initiate as well as modify and establish rates.

Rates are to be so adjusted that the carriers as a whole in the entire country, or in each rate, group, or territory, will, under honest, efficient, and economical management, reasonable maintenance and expenditures, earn an annual net railway operating income that will be as near as possible to a fair return upon the aggregate value of the property of such carriers held for or used in the service of transportation.

During the two years beginning March 1, 1920, the Commission will adopt 5½ per cent as a fair return on the actual value of railroad properties and at its discretion may add a sum not to exceed a total of ½ per cent for improvements, betterments, or equipment chargeable to capital account.

The Commission is given exclusive control over the issuance of all railroad securities, except notes maturing in less than two years the total of which is less than 5 per cent of the issuing railroad's capitalization.

The law authorizes a system of labor adjustment boards to be established by employers and employees. A central railroad labor board of appeal is created with power to hear disputes and initiate investigations. The members of this board, three of whom are to represent labor, three the railroad managers, and three the public, are to be appointed by the President and confirmed by the Senate. There are no penal provisions for the enforcement of the decisions of this board.

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CHAPTER IX

PUBLIC UTILITY BONDS

Distinctive Features

In the preceding chapter a brief description was given of the different classes of railroad bonds, such as debenture bonds, collateral trust bonds, and equipment trust certificates. The classification and descriptions apply equally to public utility bonds, since these securities are issued under similar conditions and for the same purposes as the railroad obligations. The subject matter of the present chapter, therefore, will be limited largely to the distinctive features of the public utility companies.

It is a question whether in the grouping of investment securities, public utility issues should be separated as a distinct class from railroads. A railroad is a public service corporation as much as a gas company or a telephone company. There are several considerations, however, in connection with public service corporations other than railroads which in discussions of bond investment deserve to be treated separately.

1. Franchise

In the first place a public utility company must generally obtain from some local public authority a franchise, which is defined as a right to use a public highway or public property in common with the public. Of course, a railroad operates under franchise too, but it is usually incorporated under a general legislative act and

there are no specific grants other than those contained in the legislation. Railroads, therefore, are not concerned primarily with local authorities in securing their franchises.

Moreover, public service corporations as a rule oporate on street surfaces and under public streets, i.e., on public property, whereas a railroad operates on its own right of way and for the most part uses its own property exclusively. There are cases, however, where railroads operate through streets. In obtaining this grant, the railroad may be obliged to operate under the conditions laid down in a local franchise, or in accordance with special contracts made with political bodies sanctioning the use of public property.

The acceptance of a franchise by a public utility company is generally considered as placing the company under the regulations imposed by the authority granting the franchise. Therefore, it should always be borne in mind in studying public utility bonds as investments that the activities of the issuing companies are subject to severe public regulation.

2. Localized Operation

A second point of distinction between public utilities and railroads lies in the fact that the former are usually localized in their operations, whereas railroads extend over a large geographical area. A gas company, for example, is usually restricted in its operations to one city or section of a city. Its interests are bound up with the municipality. If the municipality declines and disappears, the public utility passes away also. If economic conditions become very bad in the municipality, the public utilities operating there are likely to suffer in some way. There is not a wide geographical area

of operation and a consequent wide distribution of investment risk as there is in the case of railroad companies.

A railroad company operating through an extended territory does not usually suffer a severe loss if one or more branch lines are abandoned or an important industry within its territory ceases operations. Moreover, a company operating over a large area is not likely to suffer an irreparable loss if it experiences an earthquake or if its buildings are damaged by fire or a local disaster. Public utility companies with localized operations do not enjoy the same freedom from the possibility of total collapse. A good illustration is the effect of the earthquake at San Francisco in 1906. In this calamity the railroads did not suffer as much damage relatively as the other public service companies.

To eliminate the risks of localization there have been organized within the last two decades public utility holding companies, whose purpose it is to own, control, and operate public service corporations in a number of different localities. Because such holding companies operate through corporations whose properties are scattered in different geographical sections and over wide areas, the development of an unfavorable political attitude on the part of the public, unexpected damage, or any other bad turn in the affairs of one locality may be offset by favorable developments in the affairs of other localities.

3. Independent Units

There is yet another quite important distinction between railroads and public utility companies. The latter are usually operated independently of one another. Their business originates with themselves, and they distribute

their services or products directly to consumers. Railroads are not independent units. Each of them forms but a part of one vast transportation system. Consequently, railroads have a continuous interchange of traffic with each other, which leads to standardization of their properties. Thus, there is a uniform track gauge and the same kinds and classes of cars and locomotives, constructed with interchangeable parts, so that each railroad may operate closely with other railroads. This is not true of the local public utilities, except perhaps power plants and telephone and telegraph companies. One big corporation largely controls the telephone business in the United States, and in this instance there is more or less uniformity and standardization throughout the industry. In some cases, it is true, traction lines interchange services and equipment, but such interchange is more an exception than the rule.

Duration of Franchise

What bearing have these distinctive characteristics of public utilities on the bonds they issue? In studying the relative investment merits of public utility securities the investor would do well to look into the conditions of the franchise under which the debtor companies operate. If investors, for example, had studied more thoroughly the franchise contracts under which the Interborough Rapid Transit Company and other street railways and public service companies operate, many of them perhaps would never have bought their securities.

The investor's interest in public utility franchises is chiefly with reference to certain restrictions usually found in these grants. In the first place he should inquire as to the duration of the franchise. The corporation may be granted the right to use public property and

operate a public service without any limitation as to time. These franchises are called "perpetual," and when granted by public authority without the power of recall or cancellation they constitute an irrevocable contract that cannot be impaired by legislation. In the early days the perpetual franchise was the rule. Nowadays, it is the exception. Thus, the first street car companies in many cases were originally granted a perpetual right to run cars through the streets. The modern policy is to give a so-called "indeterminate permit," under which the company is granted the right to use the streets "during good behavior," the city or state reserving the right to revoke the franchise, and to purchase or otherwise take over the utility. There are limited franchises, on the other hand, granted for various periods, extending from twenty-five to as many as one hundred years in a few cases.

The bondholder is interested in knowing the duration of the franchise with reference to the bonds he holds. He certainly should not risk buying a bond of a corporation the franchise of which expires before or within a few years after the bond comes due. Suppose his bond is due in 1945 and the franchise expires in 1948. If the company does not expect to renew the franchise it is not very likely to maintain the property in good physical condition, which will thus become worthless as security for the bond.

Natural Monopolies

In addition to its duration, the nature of the franchise is an investment factor. If it gives the company an exclusive right to lay water or gas mains under certain streets it grants a monopoly in the particular service. Monopoly avoids competition and duplication, and thus

affords a basis for assuring stability of earnings. Street car companies generally have exclusive rights to lay down tracks on certain streets or roads and in many cases the exclusive use of the tracks. Public utility companies are, therefore, frequently natural monopolies, because it is either impossible or uneconomic to have two or more enterprises providing the same service when one can do it just as well at probably little more than one-half the expense.

It is of material advantage to a company to have the exclusive right to perform certain services as well as the exclusive right to use certain public property. The greater the monopoly, the better it is for the company. For example, a company in Chicago some years ago was granted the right to construct subways, originally for the purpose of laying gas mains and wire conduits for light and power distribution. The subways are applied to that purpose today, but the franchise was so broad that it enabled the company to use them for other purposes, and they are now used also for carrying and distributing freight throughout the city.

Charges for Service

The franchise limitations relating to rates and charges for services are likewise very important matters to the investor. Where the charges are fixed or limited in the franchise and higher rates are prohibited, the security-holders are likely to come to grief. This has been the experience of investors in the securities of the Interborough Rapid Transit Company of New York City. The contract with the city limited the fare the company might charge to 5 cents. Notwithstanding the high operating costs resulting from the war, the city administration has held the Interborough to the contract. If

the clause relating to the 5-cent fare had been left out of the franchise contracts, the Interborough bondholders would never have had to worry about a default of interest on their holdings. The original franchise of the Manhattan Elevated Railroad, now comprising a part of the Interborough Rapid Transit System, on the other hand, grants the company the right to charge a fare as high as 15 cents, the rate to vary according to the length of the journey.

When there are no provisions in the franchise fixing rates and charges, the courts have held that public utility corporations are entitled to charge whatever will yield a fair return on the value of their property. Thus the rates charged by the Consolidated Gas Company of New York are not fixed by its franchises but by the New York legislature. Several years ago a law was enacted naming 80 cents per 1,000 cubic feet of gas as the rate. It was contested on the ground that it failed to afford a reasonable return on the investment. The United States Supreme Court maintained at the time that the rate was just. But the court also held that if the rate subsequently failed to furnish sufficient net earnings to give a fair income return on the value of the property, the company should be permitted to charge a higher rate. Accordingly, in 1920 a higher rate was temporarily granted. Such offsets to increased operating costs arising from war conditions would seem to indicate an advantage in buying the securities of public utilities whose franchises do not limit the rates they may charge for their service.

Public Need of Service

Another investment factor to be considered in connection with public utility bonds is the nature of the

public need for the company's service. An electric light plant in a wilderness will have little demand for its service. Certain corporations have extended electric transmission lines hundreds of miles from populated sections at heavy capital cost. The safety of the principal of the bonds of these corporations will depend largely on the need that can be developed for the power furnished by these transmission lines. Matters of this kind are now closely looked into by both engineers and investment bankers before purchasing wholesale public utility securities.

After the need for the service has been determined, the next step is to examine whether the need will be permanent. There might be a present need for a ferry service at some point across the East River. But if in a few years a bridge is built across the river, the need for the ferry service would cease and the ferries would have to be scrapped. Gas companies that were organized some years ago in the hopes of a perpetual and expanding need for their services were in some cases not very successful because of the competition resulting from the introduction of electrical illumination. In a number of cities gas companies have gone into the electric business or become merged with the electrical enterprises in order to control this competition. Thus in New York City the New York Edison Company is owned and controlled by the Consolidated Gas Company, and has proved a good and profitable acquisition.

State Commissions

The possibility of a public service company's having to perform its service under conditions imposed by public authority is also an important matter for the investor to investigate. The conditions are generally given in its

franchise and charter, and require careful study, especially those having to do with the regulation of capitalization and earnings. In these matters public utility corporations are quite generally controlled by state commissions. Most public utility companies require a large initial investment of capital to perform the service adequately. In some cases the amount of capital needed for installing a plant may be too large to assure a fair return on the investment, even if there is some demand for the service. This is a matter the engineer should investigate and study in determining the physical character of the plant.

Costs of Operation

An investor should not feel secure in his commitment when he has merely an absolute mortgage on a costly public utility plant. The property, in addition to being well constructed, should be well patronized and maintained. Not many years ago, when public utilities were very popular as investments, bankers urged the purchase of the public utility bonds, pointing out that the maintenance costs of these properties were essentially stable, while earnings tended to increase with the development of the service. The basis of their argument was that public utility companies, by increasing the output of their service, could correspondingly reduce the costs of operation per unit of output. But it must be remembered that the operating costs and upkeep charges must be met regardless of whether the need for the service is increasing or decreasing, and if the costs increase more rapidly than the revenue, the net earnings available for interest are adversely affected. Public utilities are subject to fluctuating materials and labor costs, as manufacturing concerns are, but they cannot so easily shift the burden.

Upkeep

Another matter for study in connection with operating expenses is the necessity for proper depreciation provisions. Maintenance must be kept up if the company is to perform efficient service, and depreciation or obsolescence must be allowed for if it is to have sustained value and earning power. Public utility companies, particularly when subject to competition, have to take advantage of the mechanical and technical improvements even though they incur heavy losses in scrapping the old equipment. Therefore, in studying public utility companies an investor should look carefully into the provision made for depreciation losses. With a railroad, guarding against depreciation losses is not so important. A railroad's investment is scattered among relatively small units of physical equipment which are readily replaced from current earnings. Public utility investment, on the other hand, is largely localized in expensive plants, so that a single replacement frequently requires a relatively heavy outlay of new capital.

Net Versus Gross Earnings

A noteworthy investment feature of public utilities is the relative stability of their earnings. Since most utility companies furnish necessary services, the need for which is not affected by fluctuating business conditions, their revenues are not greatly disturbed by a transition from good to bad times. In this connection, it should be remembered, however, that the stability applies only to gross revenues and not to net income, or the amount left after operating expenses are paid. Operating costs in recent years have greatly increased among public service companies as well as among other business concerns. As the charges for services could not be increased

in proportion to the growth in operating expenses, heavy losses of net income have resulted. The situation of the Interborough Rapid Transit Company of New York illustrates this point. The company's gross earnings have been steadily increasing, but the operating costs have increased faster and have reduced the net revenue below the company's interest charges. It is the net earnings and not the gross revenues which determine the safety of income on bond investments.

Then again, as an offset to this relative stability of earnings, public utility companies as a rule do not share in general business prosperity as much as other companies. When business is very good, manufacturing companies and railroads earn more. But the income of a gas company or a street car railway is not affected by the better times. Moreover, manufacturing companies can curtail their output to keep up prices when the market is unfavorable. Public utilities cannot do this since they must sell their service continuously, even if at a loss. Moreover, they are restricted to their locality and cannot sell their service where they can get the highest price.

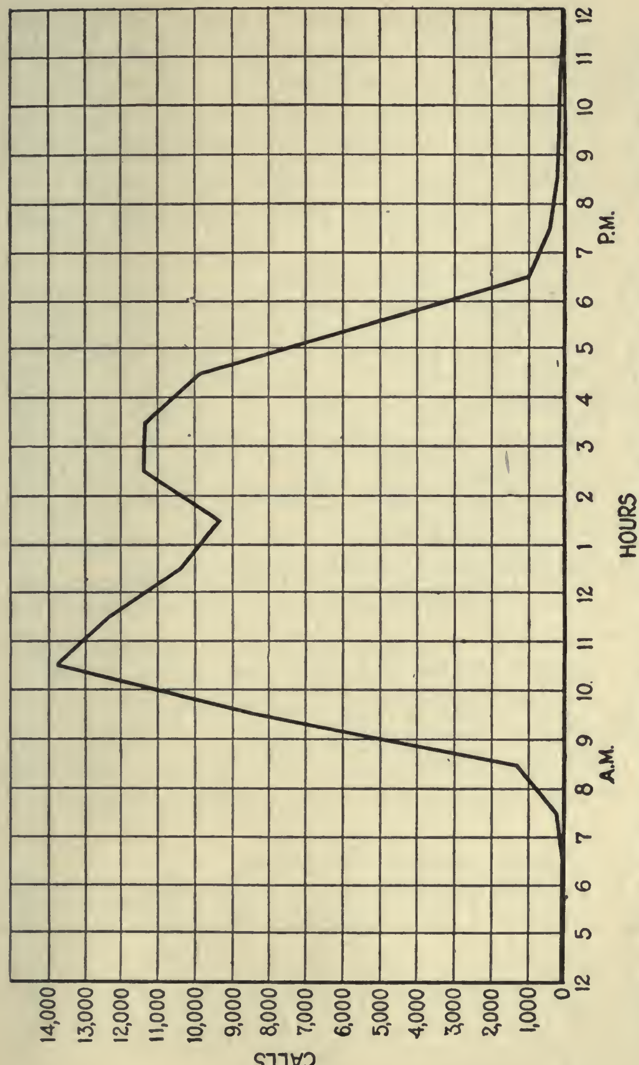
Large Investment Necessary

As already stated, most public utilities require a large amount of fixed capital. The original plant instalment involves a much greater outlay relatively than in most other concerns, particularly when modern equipment is being used. Moreover, capital cannot be easily provided from current earnings, as in a manufacturing company. To meet the public demand for service, it must generally be secured at once, as it is impossible to wait until earnings have increased. Much of the capital investment in public utilities in recent years has been in vast hydro-

electric plants. These require a tremendous capital outlay before operations begin and considerable time must elapse before earnings commensurate with the amount of the investment can be expected.

Another reason why large capital investment is necessary in public utilities is that public service companies must have a plant and equipment to meet the largest demand that may be made for service at any particular time. This point of maximum demand is called "the peak of the load." A utility corporation, such as a gas company, is given a franchise to furnish adequately a public service, which is not demanded continuously in equal volume or intensity. The proportions of the demand vary with different public utility companies and at different hours of the day or in different weeks or seasons of the year. A diagram on the page opposite illustrates the average variation for the larger cities of the country in the number of telephone calls made from business offices in the course of a day. At midnight its use is almost nil. It rises steadily till 10:30 A.M., when it reaches its maximum point, and then declines towards the evening. The telephone company's equipment must be adequate to meet the "peak." Hence the necessity of a relatively large investment in fixed capital. The earnings of the whole service must be sufficient to pay the interest on the whole investment including the part used only a portion of the time.

In growing communities public utilities have to meet not only the actual, but the probable maximum demand. They must, therefore, provide additional plant instalments in advance of actual use. A gas company frequently lays mains in suburban sections where there is very slight demand for its service, either to meet the conditions of the franchise or to keep out potential competi-



Graphic Chart Showing Fluctuations in Number of Telephone Calls During Twenty-four Hours.

tion. A fertile cause of mortality among street railway companies has been an excessive expansion into outlying districts. As long as their services are restricted to densely populated sections of a city their earnings may justify the capital investment, but when they reach out into regions producing little traffic, they are apt to increase capital indebtedness more rapidly than earnings.

Working Capital Requirements

The fact that a large amount of capital is required for plant installations of public utilities eliminates to a great extent the need of a large amount of working capital, which is required only for payment of wages and materials. In hydroelectric companies these payments are comparatively small. Besides, most public service corporations operate on a cash basis, as they do not have to extend credit to their customers as many industrial corporations find it necessary to do.

In view of the fact that public utility companies have a relatively high earning stability which normally insures them against sudden and wide fluctuations of income, they as a rule can safely carry a relatively heavy bonded indebtedness. Investigation shows that public utility companies are bonded more heavily than any other class of business corporations except possibly railroads.

Public Utility Holding Companies

In order to eliminate some of the uncertainties and risks of public utility companies there have developed in recent years the public utility holding companies, which, by distributing investments over a large geographical area and by operating systematically and economically the various companies that they control, have been able to enlarge the earning power and on

the strength of this increase to sell their own stocks or bonds. Several large holding companies, which control widely scattered gas plants, electric light and power plants, and other large public undertakings, and which employ the best technical skill, have eliminated the risks attaching to small localized concerns and have stabilized the earnings of the subsidiary companies as a whole.

Such holding companies can expand their operations into almost any field. Some have gone into the oil business and have offset the losses they experienced from the abnormal conditions resulting from the war. Many independent public service companies have suffered during and since the late war because of their inability to vary their business to meet new conditions. They have also suffered because of the inflation of currency, since their charges have remained stationary while their expenses due to the high prices and wages have increased abnormally. The market value of the bonds of these companies has depreciated accordingly.

Public Regulation and Supervision

The stability of investments in public utility companies has been further enhanced in recent years through the adoption of a definite policy of public regulation and supervision. All of the leading states of the Union have instituted public service commissions for the purpose of regulating and supervising public utility corporations. The formation of these commissions on the whole will result advantageously to the investor. In addition to promoting publicity with regard to the affairs of public utility corporations, these commissions do away with much of the direct interference of legislatures in the business of the corporations. The companies are also relieved from the necessity of catering to local poli-

ticians or political parties. Moreover, the men appointed to these commissions in most cases are selected from among experts well acquainted with the management and operation of public service corporations. Through constant contact with the affairs of the corporations they learn to judge the business properly, and experience shows that they are not oblivious of the rights of security-holders. The commissions supervise the financial as well as the operating activities of the companies. The purposes for which new securities are to be issued are carefully scrutinized by them, so that no charges are made to capital which should properly be made to operating expenses. Securities carrying the stamp of a public commission's approval are likely to have the qualities of a sound investment.

The public service commissions have also promoted uniformity and standardization in accounting methods, so that the financial results of public utility operations under their supervision are now correctly and intelligently set forth and can be readily compared.

Other Investment Factors

There are additional investment advantages attaching to public service securities. Many years of invention and progressive development in processes and in mechanical equipment for furnishing utilities have effected greater stability in methods and appliances. Depreciation and displacement are not as potent dangers to permanency of investment value as formerly. The experimental stage in many cases has been passed and the financial losses occasioned by untried processes or uncertainty of demand for the services furnished are no longer such as to deter investors from purchasing public utility securities.

Because of the enlargement of the field of their operations the companies have larger credit facilities, affording them a broader market for their securities, which places the securities on the same plane with the issues of railroads and the giant industrials. With these fundamental advantages public utility bonds offer a large and profitable field for investment. The yields on them are now larger than on municipal and railroad issues. They are even higher than on some industrial securities of the same grade.

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CHAPTER X

INDUSTRIAL BONDS

Lack of Standardization

Unlike railroad and public utility companies, industrial corporations do not readily lend themselves to comparative analysis for investment purposes. The activities and operating results of this group of business organizations cannot be gauged so easily by the use of standard units, as for instance, the ton-mile in the case of railroads, or the kilowatt-hour in the case of electric concerns. This is due to the lack of uniformity in the industrial and financial structure as well as the accounting methods of manufacturing concerns. Railroad activities have become thoroughly standardized, and comparative statistics for contrasting the operations and financial status of one railroad with those of another are widely used, particularly in analyzing the values of its securities. The same method can be applied in a considerable degree to public utilities which perform services similar to those performed by railroads.

It is exceedingly difficult, however, to use standard units or indices in a comparative study of industrial corporations. The United States Steel Corporation, for example, has its peculiar operating and accounting methods and its own system of financial and industrial organization, which is probably not followed by any other steel concern. The Republic Iron and Steel Company engages in a similar line of business, but its methods of operation are quite different, being adjusted to the

size and character of its plants and the amount of its output. In general, industrial and commercial concerns do not follow uniform rules and methods of accounting such as are imposed by the Interstate Commerce Commission on railroads, and by state public service commissions on public utility companies.

Unrestricted Field of Operation

Another distinction possessed by industrial companies from an investment standpoint is that they are constantly varying and extending their commercial and financial activities. A railroad generally does only a transportation business; a gas company is limited to supplying gas to consumers, and an electric company to furnishing and distributing electric current. An industrial company, however, while it may be organized to manufacture, say, railroad cars, is free to turn its operations to other lines, such as the construction of military equipment and munitions, the making of automobile trucks, etc. Again, a company organized to sell cigars can easily dispose of its supply and go into the confectionery business. There is little legal or economic restriction on the activities of commercial undertakings. They can expand and diversify their production practically as they will.

The capacity for expansion and diversification of activities means large possibilities of income growth. An industrial company is not physically limited in the selection of the market for its products. It can extend its markets almost anywhere, whereas railroads and public utilities are generally limited in marketing their services to the territories where they are located. A large industrial corporation may have the whole world for its market. Its expansion possibilities are limited only by competition and availability of capital.

Early Defects of Industrial Consolidations

The active consolidation of large industrial concerns whose securities have been offered as investments in the United States began in the last decade of the nineteenth century. Though several large consolidations may be ascribed primarily to the desire of promoters to foist securities of doubtful value upon the public, a considerable number were due to the growing confidence in American industrial progress and to the desire to eliminate destructive competition. In view of the circumstances under which the large industrial combinations were formed they naturally had many defects which were reflected in the investment standing of their securities. These defects may be briefly summarized as follows:

1. Overcapitalization.
2. Insufficient working capital.
3. Insufficient integration.
4. Inexperience, combined with inadequate information regarding the conditions pertaining to their respective industries.

Each of these shortcomings will be considered in turn.

1. Heavy Capitalization

Overcapitalization was undoubtedly the most pronounced defect in the organization of the large industrials. The consolidations, however, made it necessary. The former owners of the plants taken over generally demanded, in addition to cash, prior lien securities of the consolidated companies as part of the purchase price. This led to the creation of large issues of cumulative preferred stock carrying high dividend rates. In most cases the outstanding preferred stock of the new con-

solidations was equal to, or in excess of, the value of the plants acquired. The promoters, in order to recoup themselves for their cash outlay and their labors in bringing about the consolidations, endeavored to obtain from the public the highest possible price for the new common issues. Accordingly, unwarranted dividend payments on the common stock were made to improve the market for such securities.

2. Lack of Working Capital

The inadequacy of working capital seriously hampered the progress of the industrial "trusts." In acquiring control of their respective industries, a number of the consolidations took over obsolete and dilapidated plants. Modernization and extension of these plants became necessary, and funds for this purpose had to be obtained from accumulated profits. Several of the industrial concerns endeavored to increase the profits by increasing prices, but this policy merely resulted in renewed competition and widespread popular disfavor. The policy of paying out in dividends an excessive amount of current earnings further impaired working capital. This not only prevented the concerns from expanding their operations, but weakened their power of withstanding business depression.

3. Lack of Integration

In some cases the new combinations lacked integration or unification of the several activities which comprised the particular line of industry in which they were engaged. Integral processes are understood to refer to the various stages of manufacture and distribution which directly follow each other as the raw material is converted into the finished product and placed at the disposal

of the consumer. Combining these activities in one organization results in commercial independence and is particularly important in preventing financial disasters due to violent fluctuations in raw material prices. Examples of concerns which have been successful in this direction are the United States Steel Corporation, the United States Rubber Company, and the International Harvester Company.

4. Inexperience

Industrial corporations suffered severely because of their inadequate knowledge of conditions in their respective industries, and their inability to gauge properly the demand for their products or to reduce operating expenses in times of business depression. Railroads after a number of years of disastrous experience have succeeded in accomplishing these ends. The industrial companies have of late been following their example. This was manifest as early as the business depression of 1907, when, in spite of the serious financial stringency and the sharp declines in the consumption of their products, there were relatively few receiverships among large industrial concerns.

Because of the defects of organization, the new industrial consolidations naturally encountered considerable difficulty in marketing their securities. The experimental character of a number of the undertakings discouraged investors from entering this industrial field of investment. Owing to the popular distrust and the fear of hostile legislation against combinations, the shares of industrial corporations did not have the market value to which their earning capacity seemed to entitle them. Moreover, the formation of a large number of consolidations within a brief period of time caused an "un-

digested" supply of securities and unfavorable market conditions.

Later Policies

Having benefited by their early experience, industrial corporations have in recent years scored notable progress in their finances by practicing the following policies:

1. Conservative distribution of dividends, i.e., the withholding of dividend payments until a time when the financial standing and physical condition of the property permitted the distribution of profits to shareholders.

2. The building up of cash reserves out of profits so as to insure adequate working capital, the gradual betterment of the physical value and earning capacity of their plants, and the elimination of the overcapitalization evil.

3. Better knowledge of their respective industries, both as to the character of the demand for their products, and of their relations to distributers, consumers, and employees.

4. The maintenance of earning stability by diversification of activities and enlargement of markets. Export business has been developed and in some cases foreign plants have been constructed, while as a general rule the aim has been to broaden the markets for their goods. The control of raw materials, such as ore, lime, timber, coal, etc., has rendered the large manufacturing concerns independent of temporary price fluctuations from which they had suffered previous to the early period of industrial combinations.

The period of most excessive capitalization and unstable earnings has passed. Bankers and investors are insisting upon more and more information concerning the plans of organization, the actual value of the tangible assets, the proved earning capacity, and similar data.

Improvement of Financial Condition

The financial position of the industrial combinations which have benefited from their hard experience in the immature stages of their existence may be described under two heads:

1. The physical betterment of plants, the enlargement of working capital, and the general improvement in their financial condition, combined with an understanding of their markets, now assures them stability of earnings sufficient to resist the effects of later business depressions.

2. Their securities have been gradually advancing from the speculative to the investment class.

Study of Investment Factors

As pointed out above, lack of standardization prevents proper comparison of the income accounts of industrial companies so that it is difficult to judge of the investment merits of the bonds of a company by comparing its activities and operating results with the activities and operating results of another company. The investor in his analysis of a company's progress is thus limited largely to a study of its financial statements covering a period of years. In making such analysis he should be careful to note any changes in accounting methods during the period he is investigating. An industrial company may alter the form of its balance sheet or income account whenever it desires. Thus, a company in order to avoid payment of income taxes might augment its expenses by increasing reserves for depreciation and for contingencies, such as flood and fire. Industrial companies are in the same position as an income tax payer, who has much leeway for the use of individual judgment.

However, due largely to the rise of the profession of accountancy in the United States and also to the fact that all large business concerns are now practically forced to use the services of professional licensed accountants to certify to the correctness of their accounts, there is a progressive trend toward correct and uniform accounting methods. In Great Britain the chartered accountant is a legally responsible profession, and if a licensed firm of accountants certifies to the correctness of a fraudulent or misleading balance sheet or income statement of a corporation, persons who invested in the securities on the strength of these statements can sue to recover losses.

In inspecting a report of an industrial corporation it is always well to ascertain if the firm of accountants certifying to the financial statements is reliable. Very often this certification reads: "We certify that the accounts are correct in accordance with the books." The phrase "in accordance with the books" relieves the certified accountant of responsibility and should be a warning signal to the cautious investor. The verification of inventories and of depreciation reserves in relation to physical condition of property are essential to proper certification of accounts.

Income Statement of Industrial Company

Methods of interpreting the financial statements of industrial corporations have already been covered in a general way in Chapter II. Here, merely the special features relating to the accounts of industrial concerns need be discussed. Many industrial companies do not publish their gross income, or sales, as it is their policy to withhold this information from competitors. Let us, however, take an income statement which contains this item, as the following:

Gross Sales or Revenues........................		$1,000,000.00
Deduct:		
Operating Costs	$600,000.00	
Depreciation	50,000.00	
Taxes	50,000.00	
Other Reserves to offset losses.......	50,000.00	750,000.00
Net Income Available for Bond Interest...........		$ 250,000.00
Operating Ratio 75%		
Deduct: Interest on Bonds......................		100,000.00
Margin above Interest		**$ 150,000.00**

The statement shows deductions from the sales for operating costs, depreciation, taxes, and reserves to offset certain contingencies arising directly out of operation. These items total $750,000, or 75 per cent of the sales. This 75 per cent is the operating ratio for the year. The fluctuations of the ratio from year to year is an index of the increasing or decreasing efficiency of operations. Depreciation is a matter for the officials of the corporation to determine, and it is well to see that it is separated from direct operating costs.

Some corporations try to follow a uniform practice in allowing for depreciation, while others do not. It is also well to examine whether maintenance is kept up, inasmuch as a poorly maintained and equipped plant eventually results in lower efficiency, smaller output, and impaired earnings. What is left after deducting the expenses, operating costs, depreciation, taxes, and reserves, is the net income which, in our example, is equal to $250,000, or 25 per cent of the sales. This is ordinarily the amount available for bond interest and is the item in the statement in which the bondholder is interested most.

The corporation has an issue of bonds, the interest on which is $100,000. The deduction of this interest

charge from net income leaves a margin of $150,000. If that or a larger margin appears in the income statement for a number of years in succession the bondholder may feel reasonably confident that his interest will be paid to maturity.

Industrial companies that provide sinking funds in order to meet the maturity of their obligations are not required by any observance of accounting principles to charge this item against net earnings unless such sinking funds represent the using up, extinction, or depletion of fixed assets.

After the bond interest is paid, the company may pay out the balance of the earnings in dividends on its preferred and common stock. It may pay out the full amount or even more to its stockholders, or it may reserve all or part for the acquisition of additional properties and materials. It is always to the advantage of the bondholders for the company to put back a large part of the surplus earnings into the property, whether such earnings are applied to the increase of the fixed assets or current assets.

Consolidated Statements

The foregoing analysis of an industrial income statement applies only to the statements issued by industrial organizations of the simplest form. The great bulk of the corporations whose securities are sold to the public as investments have a complex organization, and with few exceptions come within the class known as "holding companies." Many of these companies simplify their financial statements by publishing consolidated accounts which combine the financial results of both the holding and the subsidiary companies.

In analyzing a corporation's financial statement care

should be taken to see whether it is a consolidated statement or one of a single unified corporation. The holding company pure and simple, as already pointed out, does not own physical assets directly, but only the stock of its subsidiary companies. The United States Steel Corporation, which is a holding company, publishes a consolidated statement that combines the figures of the numerous controlled companies. This is the best method for holding companies to follow. Some holding companies, however, publish statements based on their own books of accounts. The investor, however, desires to know what are the real profits and losses resulting from operations of controlled companies, and these can be concealed or excluded entirely from the statements of the holding companies. By ownership of the voting control of capital stock of the subsidiary companies, the holding company can determine the amount of dividends it may receive from the subsidiary companies, whether such dividends have been actually earned or not. Thus a statement of a holding company can be drawn up very much as the directors wish.

The need for consolidated accounts practically arose with the growth of the large industrial combinations, or so-called "trusts." There were, of course, prior to that time many corporations which had acquired subsidiary companies but they operated them as separate corporations. Probably the first important statement of consolidated accounts to be published was that of the United States Steel Corporation in 1902. On the other hand, the American Tobacco Company, which was organized several years before the Steel Corporation, did not combine the accounts of subsidiaries. The American Tobacco Company, therefore, could conceal the true earning capacity of its subsidiaries from the security holders.

Nature of Statement

The accounts of a holding company should be prepared and published in such form as will exhibit to the security-holders the true financial position of all the companies affiliated with the concern. It has long been recognized by accountants that this can only be accomplished by consolidation of accounts, particularly when the affiliated companies are engaged in the same or closely related businesses. Accordingly, the Revenue Act of 1918 required that "corporations which are affiliated . . . shall, under regulations prescribed by the Internal Revenue Commissioner . . . make a consolidated return of net income and invested capital."[1]

The principal point for consideration to the investor in regard to consolidated accounts is: How shall the consolidated financial statements be prepared and published? The object of such statements is to show the true financial position of a company and its subsidiary companies in relation to the outside public. Consequently all inter-company holdings of stock and balances of every kind should be eliminated in the published statements.

Where a corporation does not own the whole of the capital stock of a subsidiary company, and it consolidates the latter's accounts with other subsidiary companies, the proportion of the accounts of the particular subsidiary it eliminates is the percentage which the par value of the stock not in its possession bears to the total capital stock. Only the proportion of the earnings of the subsidiary company represented by the stock it holds is taken into the income account of the parent company.

[1] The income tax regulations provide that the owning or controlling of 95 per cent or more of the outstanding voting capital stock shall be deemed to constitute an affiliation, but that consolidated returns may be required even though the stock ownership is less. The regulations call for a disclosure of affiliations where the stock ownership is in excess of 50 per cent.

Balance Sheet

In constructing an industrial company balance sheet the items should be so classified that bondholders are able to know the amount of actual tangible property as distinguished from the amount of what in accounting is known as "good-will," but which is commonly called "water." Much has been said and written about watered stock, or excessive capitalization, but relatively few persons know just what it means. Technically, it represents merely the amount of securities issued in excess of the fair value of the property acquired by means of them. A balance sheet which does not show the good-will separately is of very little value to investors.

The fixed and permanent assets of a company, as pointed out in Chapter II, furnish the tangible security for mortgage bonds. These assets comprise the company's permanent investment, with which it does business. In other words, it has no intention of parting with these assets either by converting them into salable products or by disposing of them for cash.

Working Capital

In addition to the fixed assets, the current assets should be analyzed in studying the security behind bonds. They furnish the materials for making profits. Cash is the most important item among them because with cash a company can buy goods and materials, pay salaries and wages, extinguish debts and other liabilities. Receivables, notes receivable, and accounts receivable are next to cash the most liquid, as they can be converted into cash by collecting them from debtors or discounting them at banks. Inventories represent goods, materials, supplies, etc., which are to be worked into finished products and disposed of at a profit.

If a company is short of current assets it may either have to curtail its operations or borrow money to obtain needed raw materials, pay wages, etc. Accordingly, in order to reveal the investment merits of the bonds of industrial companies bond circulars frequently show the amount of net current assets, i.e., the amount of the working assets left after immediate or maturing liabilities are deducted. This figure of net working capital, as already pointed out, shows the immediate financial status of the company. The lack of sufficient working assets to meet current liabilities when due may cause receivership. Accordingly, in many mortgages of industrial companies there is a requirement that the corporation maintain its net working capital at no less than a certain fixed minimum. Thus, if the bond issue is $1,000,000, the corporation may be required to maintain net working capital at $750,000. In connection with the issue and sale of short-term obligations, the ratio of working capital to be maintained is usually much larger.

Liabilities

Set off against the fixed assets as shown in the general balance sheet are the fixed, or capital, liabilities, consisting of capital stock and bonds, the stock representing proprietorship and the bonds the capital indebtedness. The bondholder need have no fear because of any large amount of capital stock outstanding unless the company is using up its cash by excessive payment of dividends. The attention of bondholders should be directed more to the current liabilities, such as the bills payable, the accounts payable, the unpaid accrued interest, and similar items of indebtedness. Excessive current liabilities, as just pointed out, may bring about a default in the payment of bond interest, even though the corporation may

show an excess of total assets over its liabilities to creditors.

Bondholders' Equity

The equity of bondholders in the assets of a corporation is frequently worked out in the following manner: The net working capital, as explained above, is obtained by deducting the sum of the current liabilities from the sum of the current assets. To the resulting amount is added all the fixed tangible assets including the securities held for permanent investment, as stocks and bonds of affiliated corporations. The total shows the estimated amount of property covered by the bonds. It is however, of no great value, unless the basis of the book value of items in the accounts is known, i.e., whether they are valued at the fair market values or not. Not infrequently the valuations of fixed assets in the accounts of industrial corporations have no relation to actual or fair values, but are placed at arbitrary amounts to offset the amount of capital stock and bonds issued.

Analysis of Capitalization

In analyzing the capitalization of a company a distinction must be made at the outset between "capital" and "capitalization." Capital is the amount of actual money or equivalent value invested in the property. It comes both from the issue of securities and from profits. Capitalization, however, represents the nominal amount of securities outstanding, both bonds and stock. Profits turned back into the property become a part of the capital, but are not represented in the capitalization. It is clearly evident that capitalization even when originally paid in at face value in cash may not represent the actual value of the property.

Since the amount of capitalization may have no important bearing on the financial status of a corporation, the investor should direct his attention mainly to the style or form of the capitalization. In this connection the amount of the fixed interest bonds outstanding in relation to both the capital stock and the average net earnings is of prime importance. Industrial corporations are, as a class, subject to sudden and pronounced changes in business conditions. Their profits are likely to fluctuate widely. A bond issue, therefore, which may have a high indicated margin of safety for interest payments during a period of prosperity may suffer default in a period of depression. Large bond issues bearing heavy fixed charges relative to net earnings over a long period of time have caused the bankruptcy of a number of industrial companies which had promising prospects at first. Stockholders can be shut off from dividends without causing insolvency, but bondholders are creditors and demand regularly and punctually the income which the corporation has obligated itself to pay them. Comparatively steady net earnings from year to year offer a sounder basis for safety of income than the irregular results arising from alternate feast and famine periods in industry.

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APPENDIX

SOURCES OF BOND INVESTMENT INFORMATION

The references and sources of information relating to investment bonds are of four general classes, viz.:

1. Primary documents, such as laws and ordinances, original incorporation papers, annual reports, stock exchange listing statements, mortgages, and other publications issued directly by governments, municipalities, and corporations.
2. Statistical and financial manuals, including the periodical reports and publications of government statistical organizations, public service commissions, and other government regulating bodies.
3. Textbooks and treatises.
4. Financial and trade periodicals.

Primary or Original Sources

These consist of the various incorporation and other legal papers of business corporations on file with public authorities, viz.: the Secretary of State, public utility commissions, or the Interstate Commerce Commission; the actual mortgages as filed in the public records; reorganization papers; the annual reports of corporations to their stockholders; and the statements furnished to stock exchanges when application is made to list securities thereon, together with such other documents and reports as are prepared directly by or under the auspices of the corporations or their officials.

Much of this material is not available to the average student, and except in special cases requiring detailed investigation it may not be found essential. From a practical standpoint it is hardly necessary to have even a partial file of such documents, for the secondary sources mentioned below furnish in more convenient form all that is usually required to obtain essential investment information.

Statistical and Financial Manuals

These consist of the standard publications issued by private publishing concerns, and the periodical official publications of the Interstate Commerce Commission and other public authorities. Among the leading private publications are the following:

1. *The Statesman's Year Book.* This is a statistical and historical annual of the states of the world and is issued yearly by Macmillan and Company, London. It is a standard reference book.

2. *The State and City Section of the Commercial and Financial Chronicle.* Issued once a year but in two parts; the first part covering New England, the Middle and Central states appears in June, and the second part covering the remaining states appears in December. They contain financial and statistical data relating to the states and cities of the United States.

3. *Kimber's Record of Government Debts (formerly the Fitch Record of Government Finances).* Issued annually. It contains a description of national government loans.

4. *The Corporation Manual (formerly Poor's Manual).* This has been the standard reference book for over half a century. It is issued annually and contains in addition to financial and operating statistics of individual railroads and other corporations, descriptions of all security issues. It is an indispensable work to the student, statistician, bond salesman, and investor.

5. *Moody's Analyses of Investments.* The first issue of this publication concerning railroads was in 1909. It has been put out annually since then and now comprises separate volumes: (1) Government and Municipalities, (2) Railroads, (3) Public Utilities, and (4) Industrials. The plan followed is somewhat different from that of *Poor's Manual,* but the purpose of the two publications is essentially identical. The introductory section of *Moody's Analyses* contains a short essay on the study of investments which will be found very helpful to students and others intending to use the work. In addition the volume contains a "key to bond and stock ratings" similar to the credit-rating methods of the mercantile agencies, such as Bradstreet's and Dun's.

6. *Railroad and Industrial Supplement of the Commercial and Financial Chronicle.* Issued twice a year on the last Saturday of May and November.

The Electric Railway Section of the Commercial and Finan-

cial Chronicle. Issued twice a year on the last Saturday of April and October.

These are of considerable value to the student, as they contain in condensed form information regarding the dates of bond issues, amounts authorized and outstanding, interest periods, due dates, brief history and descriptions of the properties, etc. The publications are regularly furnished to subscribers of the *Commercial and Financial Chronicle.*

7. *Fitch Bond Book.* Issued annually by Francis Emery Fitch, Inc., New York. It contains data in condensed form of practically all important corporation bond issues.

8. *White and Kemble's Atlas and Digest of Railroad Mortgages.* This is an elaborate compilation, and is rather too expensive for most students. The leading investment and banking houses, however, generally maintain complete sets. The maps are issued and replaced from time to time in order to keep and adapt them to changes and additions of the mortgages, liens, and other financial development of the individual railroad systems.

9. *Kimber's Atlas of Railroad Mortgage Maps.* A small and convenient guide to railroad mortgages.

10. *Standard Statistics Card Service.* Contains on cards much of the information found in the manuals and bond books.

11. Among government statistical publications helpful to investors are those issued by the following bodies:

(a) Bureau of the Census, Department of Commerce. Two volumes which are issued annually and can be readily obtained directly from the Census Bureau or from the Superintendent of Public Documents are:

Financial Statistics of States.

Financial Statistics of Cities having a population of over 30,000.

(b) *Interstate Commerce Commission.* Annual reports on the statistics of railroads in the United States. The statistics comprise mainly the mileage, traffic data, and financial statements relating to individual railroad corporations. They are accordingly different in many cases from the returns contained in the annual reports to stockholders. All the railroad companies are required to submit annual reports on prescribed forms to the Interstate Commerce Commission.

(c) *Public Service Commission of New York (First District*

and Second District). Contains statistics relating to railroads and public utilities operating in New York State, similar to data published by the Interstate Commerce Commission.

Textbooks and Treatises

There are innumerable textbooks on all phases of financial and investment problems, many of which have very little direct interest to the student. The works which are most useful to bond students and investors are listed in the bibliographies following each chapter.

Periodicals

Of these, the most valuable to students of bond investment are:

1. *The Commercial and Financial Chronicle.* Issued weekly. Contains news items and digests of reports of the railroad companies. A monthly supplement, the Railroad Earnings Section, furnishes statements of monthly earnings and operating expenses as reported by the companies to the Interstate Commerce Commission.

2. *The Daily Bond Buyer, New York.* Issued daily, with weekly and annual supplements. Publishes data regarding municipal bonds in the United States. It is very useful because of its complete record of municipal bond sales.

3. *The Financial World, New York.* Issued weekly.

4. *The Street, New York.* Issued weekly.

5. *The Magazine of Wall Street, New York.* Issued twice a month.

6. *The United States Investor, Boston.* Issued weekly.

7. *The Railway Age, New York.* Issued weekly.

8. *The Electric Railway Journal, New York.* Issued weekly.

9. The leading daily papers of the large cities have financial sections which contain data and information on investment topics.

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